

Museum (Philadelphia, Pa.
: 1885)

The Museum.

Vol. 1, No. 1-4; May - Aug.
1885.

1 May
21
NH









ANTIQUITIES.

COINS.

STAMPS.

SEALS.

BOOK-PLATES.

AUTOGRAPHS.

CERAMICS.

CURIOUSITIES.

THE



NATURE

ART

AN ILLUSTRATED MONTHLY JOURNAL
FOR COLLECTORS OF ALL CLASSES
AND YOUNG NATURALISTS.

MUSEUM

MINERALS.

PLANTS.

RADIATES.

SHELLS.

INSECTS.

EGGS.

VERTEBRATES.

FOSSILS.



WM. F. FELL & CO., PRINTERS,

1220 SANSOM STREET, PHILADELPHIA, PA.











THE MUSEUM.

A new, Illustrated Journal, under the Editorial Management of Edwin AtLee Barber, published, on the first of every month, in the interests of Young Naturalists and Collectors of all Classes.

Amongst the Contributors to the early numbers will be

DR. DANIEL G. BRINTON,
PROF. EDWARD D. COPE,
MR. HENRY PHILLIPS, Jr.,
PROF. THOMAS G. GENTRY,
PROF. J. T. ROTHROCK,

PROF. THOMAS C. PORTER,
DR. CHAS. C. ABBOTT,
MR. HERMAN STRECKER,
MR. ERNEST INGERSOLL,
MR. F. RATHBONE, London, Eng.

The MARQUIS DE NADAILLAC, of Paris, France,
CAPT. R. G. TEMPLE, of India,

and many other prominent Scientists and Collectors.

The specific object of the Publishers of **The Museum** is to supply a popular demand of our Youth for a periodical of elevated tone, which shall be, at once, a recognized medium of intercommunication and an instructor in popular science.

Subscription Price, \$1.50 per Year.

To Foreign Countries, \$1.60.

Single Copy, 15 Cents.

PUBLICATION OFFICE, 1220 Sansom Street, Philadelphia, Pa.

PRIZES FOR YOUNG CONTRIBUTORS.

An important feature of *The Museum* will be the Young Contributors' Department. For the purpose of encouraging young investigators in the arts of composition and drawing, the publishers of the journal offer the following special prizes for the best essays on the subjects mentioned:—

SUBJECTS OF ESSAYS.

COMPETITION CLOSES.

PRIZES OFFERED.

- | | | |
|--|----------------|--|
| 1. Philately | June 1st. | { One of Scott's International Postage Stamp Albums, or a year's subscription to this journal.
An old book from the original library of Maj. Gen. Anthony Wayne, containing his autograph (rare).
A collection of 50 different Mosses, correctly named, domestic and foreign, including rare and curious species.
A collection of 50 different species of Insects, correctly named.
A collection of 50 different Minerals, labeled.
Nest and Eggs of Humming-bird.
Five different kinds of Radiates, including rare species. |
| 2. On the collection of Autographs and Manuscripts. | July 1st. | |
| 3. Botany (with original drawings) | July 1st. | |
| 4. On the Habits and Life History of the "Seventeen Year Locust" (with original drawings). | August 1st. | |
| 5. Mineralogy | August 1st. | |
| 6. Ornithology and Oölogy (with original sketches). | September 1st. | |
| 7. Star Fishes (with original drawings). | September 1st. | |

RULES.

1. Essays must be written on single sheets and on one side of the paper only. These sheets must be attached securely at the upper right-hand corner.
 2. A fictitious name only must be signed to each essay.
 3. This must be accompanied by a small sealed envelope, containing the correct name, age (when under 21) and address of the writer. On the outside must be written only the name which is signed to the essay.
 4. Each essay must be accompanied by postage for its return to the writer.
 5. No one will be permitted to compete who is not a subscriber.
 6. Essays must be written by the contestants, without assistance from any one. The drawings must also be made by the writers, from nature.
 7. The facts presented must be the results of original observation, and not taken from books or information derived from other sources.
 8. No essay must contain more than 800 words, nor be accompanied by more than three illustrations.
- Prize essays will be published in *The Museum*.
All communications should be addressed to

THE EDITOR OF "THE MUSEUM,"

P. O. Box 22.

1220 Sansom St., Philadelphia, Pa.

THE MUSEUM.

VOL. I.

PHILADELPHIA, MAY, 1885.

No. 1.

FOR THE MUSEUM.

RARE AND CURIOUS BIRDS' NESTS.

BY PROF. THOMAS G. GENTRY.

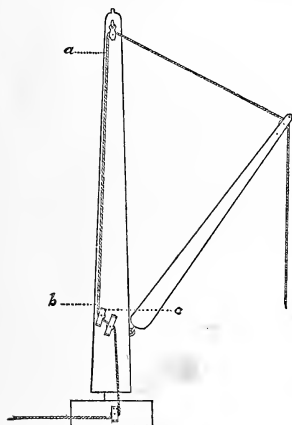
From time immemorial, it has been the current popular belief that birds of the same species never varied their style of architecture, but constructed the same form of nest, and out of the same materials, as their remotest progenitors did, instinct being the principle by which they were guided. This opinion, though long since exploded by science, is still, I am sorry to say, entertained by those who should know better. An examination of nests from different and widely separated localities affords evidence sufficient to convince the most skeptical of persons of its erroneousness. The most marked differences will be noticeable in the composing materials, as these will be found to vary with the environment, and in a wider degree in the nests of some, than in those of other, species. Even the configuration, which is less prone to change, is often influenced by the circumstances of position and latitude.

Among the thrushes, the robin is the most addicted to variation, and this is not wholly confined to the constituents of his usually mud-plastered domicile, but is frequently to be observed in the arrangement thereof, and in the contour and position as well. In Southern New Jersey, where low marshy woods abound on the outskirts of towns and villages, robins build nests which contrast most markedly with what we are accustomed to see in more northern localities. The great masses of a grayish-green fibrous lichen, which hang from tree and shrub in those sylvan marshes, are freely utilized by them, and its very nature to mat, when pressed together, precludes the necessity of using mud.

In the summer of 1877 my attention was directed to a nest of this species which was built upon a railroad embankment. The ground had an inclination of forty-five degrees. To one not conversant with the facts, such a position for a structure of the kind these birds are known to make, would appear impossible. Difficult as the task must seem to be, when viewed from a human standpoint of judging of the builders' capabilities, it was nevertheless accomplished, and in this wise: A semi-circular wall of mud, some three inches in height, was, after much labor, erected, and within the cavity thus formed was placed a coarse, substantial and bulky fabric.

Few birds are less regardful of position than the wren. In June, 1882, near the town of Thornbury, Pa., a pair of wrens selected the space in a stationary block over a sheave in a derrick, as a site for a home, and therein deposited their favorite sticks and feathers. A similar structure had occupied the same spot the previous year, and a brood of young ones raised. These nests, in the elements of composition, differed not from the typical form. It is their strange and anomalous situation, rather than anything else, that excites our interest and astonishment. The materials of the nest were so dexterously arranged as not to interfere with the revolution of the wheel. The entrance to the nest was on the side facing the rope that moved the pulley. The opposite side could have been used for this purpose, and doubtless with less danger to life or limb, but a preference seems to have been shown for the other. Why this was so remained an unsolved problem for some time; but when each bird was seen to alight upon the rope at the top of the derrick and ride down to the nest, the reason became apparent. Never did linnet enjoy the rocking twig with half

the zest that these eccentric creatures did their ride adown the rope. A hundred times a day, when the necessity arose, they treated themselves to the same pleasure, the rope moving at the rate of thirty-five feet in a second of time. Six days out of seven, from morning until night, they had the benefit of this mode of conveyance, and nothing occurred to disturb their peace and harmony. In due time a family of happy, rollicking children was raised, and the nest in the derrick deserted. In the accompanying drawing, *c* shows the position of the nest, *a* the place where the birds would alight upon the rope, and *b* where they left it before entering the nest.

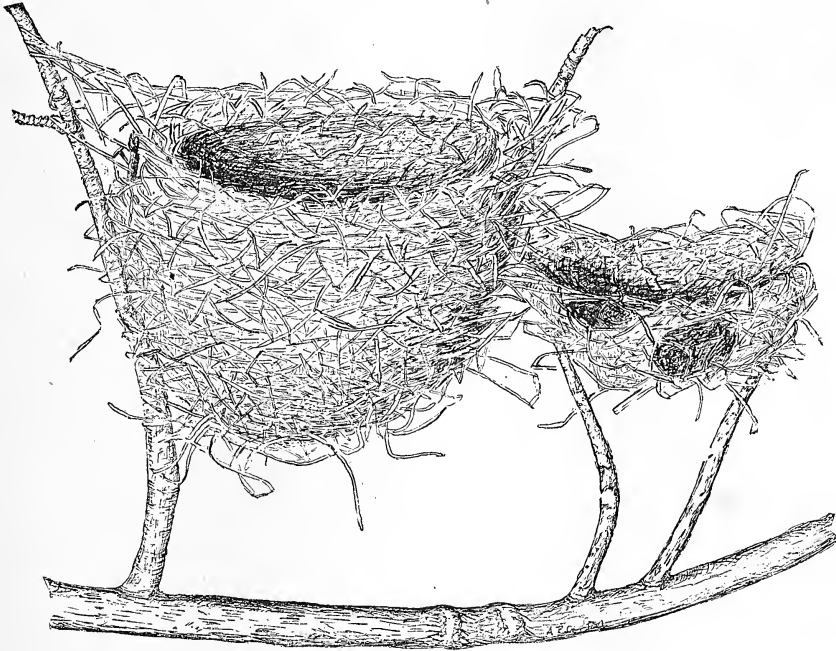


ODD PLACE FOR A WREN'S NEST.

Before me is a curious nest of the swamp blackbird. This is a rather bulky affair for the species, and was found built in the top of a cluster of cat-tails. It is firmly made of broad grasses, and securely fastened to the stems of the reeds, some eight in number, by the same kind of material that enters into its composition.

Icterus spurius, of the sub-family of orioles, constructs a truly characteristic nest, pouch-shaped in form, and either pensive or built upon a branch. Soft and flexible grasses, neatly and compactly woven together, constitute its outer fabric, while within there may exist wool, either vegetal or animal, or a lining of fine grasses mixed with horse-hairs. The handsomest nest I have ever seen was found by Richard Christ, in the vicinity of Nazareth, Pa., in the season of 1883. It is of the usual size, being five inches in height, and three in external diameter, but different from the typical form in the materials of composition. Instead of the leaves of grasses, which one naturally expects to see in such structures, this was exclusively built of the stems and heads of a species of gramineous plant remarkable for its golden brightness in a state of dryness.

A more remarkable nest of this oriole was found built upon a few small branches of a maple, at an elevation of nearly thirty feet from the ground. It is a double affair, composed of long, flexible grasses, and securely fastened to its support. The larger nest is inversely sub-conical, while the smaller, which is joined to the other by ribbons of grass, is somewhat similarly shaped, but less compact in structure. A circular opening, one inch in diameter, is a noticeable feature of the latter. That this additional structure served some purpose cannot be questioned. I am inclined to think that it was constructed with the view of accommodating either parent while the other was sitting. The aperture alluded to served, doubtless, for the head of the non-sitting bird, who, from this position, looking away from the main building, could, like a sentry upon an



DOUBLE NEST OF ORCHARD ORIOLE.

outpost, detect with comparative ease and readiness the approach of enemies. The cut gives a fair idea of the nest in its most prominent details.

But nothing can exceed in beauty and cosiness the nest of a female Baltimore oriole in my possession. It was built under peculiar circumstances, the author being a prisoner, having been taken from the parental home when quite a fledgeling. A male companion was captured at or about the same time. These birds are the property of Dr. Detwiler, of Easton, Pa., and are a source of pleasure to this elderly gentleman in his leisure moments. Though becoming quite tame under the careful and kindly management of their keeper, the female manifesting greater familiarity than her associate, it never occurred to the Doctor that either would become so accustomed to the situation

as to evince a desire to build. When alone, he always allowed them the freedom of his studio, in or out of season. One lovely June morning in 1883, the outside world being full of joy and life and sunshine, he threw open the door of their cage, and settled himself for reading. Hardly had he read a dozen lines when he felt something pulling at his hair; on looking up he descried the offender flying towards a distant part of the room with something in her bill that resembled a hair. When the Doctor had resumed his reading, she stole cautiously forward, seized another hair, and was off in a twinkling. Permitting these liberties for a while, and noticing that bits of strings were, when placed in positions to be seen, as much the objects of interest as the hairs of his head, he was not slow in divining the motive which led to this strange and unexpected proceeding. Convinced by actions as significant as words themselves could be, he at once entered



NEST OF ACADIAN FLY-CATCHER.

into the idea of his little feathered friend, and began to look about for a room where she might carry out her plan for the future, free from human interference. In a short time a place was found in the attic, which he fitted up, furnishing it with a large branch for a perch, and with the necessary materials, in the shape of new white strings, for nest building. The female now entered into her voluntarily imposed task with the most determined zeal and alacrity, and at the end of a week had constructed a domicile which her wild, untamed prototypes of the fields and the roadsides would strive in vain to excel.

In Eastern Pennsylvania rare, curious nests of the Acadian flycatcher are often found. Such a one was discovered by the writer in June, 1882. It was placed upon the forked branch of a small red oak. The dried blossoms of the hickory, which are the sole materials of the ordinary structure in this latitude, were here altogether wanting. In lieu thereof, long fibres of the inner bark of

some herbaceous plant were substituted. These were compactly modeled into a shallow, saucer-like cavity, from which depended a gradually tapering train of the same substance, for nearly twelve inches

A pair of kingbirds once took a fancy to an old apple-tree that stood a few yards from the writer's Germantown home. It was certainly not a place of quiet and retirement. Scores of noisy children daily resorted to its shelter for coolness and pastime, but the birds were not uneasy. They had fixed their minds upon the spot, and build they did. The nest was placed upon a forked branch just out of the reach of the urchins. It was a curious affair. Roots of various kinds constituted the bulk of the fabric; but, as its completion was near at hand, the opportune discovery of a bunch of

carpet rags was hailed with delight, and they were promptly adjusted to the outside, a number of ends being allowed to depend from the margin and bottom, for a distance of fourteen inches, whether for ornament or protection, I cannot say, but I am half inclined to believe that the latter was the object uppermost in the minds of the builders, for, looking from below at the nest, it seemed merely a mass of rags that had been thrown into the crotch and become lodged.

The common ruby-throated humming-bird of the eastern half of the United States is known to make a nest which is not easily imitated by another species. Nests have been found by the writer, formed of the yellowish wool of the undeveloped fronds of the fern, and others of red shoddy—the refuse of some woollen factory—instead of the soft down of the seeds of the poplar. But the most remarkable structure of all was found in Germantown, in the summer of 1883. It was saddled upon the horizontal bough of a white oak, and is peculiar from the nature of the inner fabric. This is a brown woolly substance plucked from a species of fungus, possibly a *Sphæria*, which for softness and pliability is admirably suited for nest-building. Nothing of the kind, I think, has ever before been recorded.

FOR THE MUSEUM.

A NOTED COLLECTOR.

Mr. William Bragge, F.S.A., F.R.G.S., whose untimely death occurred at Birmingham, England, on June 14th, 1884, was one of the few ardent and systematic collectors of international reputation. He was chiefly known in America as the owner of the largest collection of tobacco pipes ever formed. His early life was marked by a keen interest in all that passed around him, and at the age of twelve he was a pronounced collector. Entering into partnership with a cousin of similar tastes, the two worked hard to store their "museum," as they called the little room in which they kept their treasures, with the fossils of the district and with such foreign objects as they could with scanty pocket money obtain.

At 22, he became a civil engineer, in which profession he found the work of his life. For twelve years he was superintending engineer in Brazil, where he was identified with the important enterprise of lighting the city of Rio de Janeiro with gas. He also surveyed the first mountain railway in that country, which led to the Emperor's summer palace. For these and other services, the Emperor, who had contracted a strong regard for him, conferred upon him the high rank of Commander of the Order of the Rose. He was interested in a number of other engineering enterprises, and was connected with several prominent business firms in England. For many years he served, also, in the high office of Master Cutler of Sheffield. Some of his numerous important collections have become world-famous. He gathered together a large series of rare and valuable manuscripts and illuminated missals; objects of delicate workmanship in iron of ancient times; a curious collection of bindings, and another of cutlery of all nations. His celebrated Cervantes collection of books, numbering about 1500 volumes, which he presented to the city of Birmingham, included every book by or about the

famous author of *Don Quixote*. His priceless collection of gems and precious stones is still preserved intact in the Art Gallery of his native town. He also formed collections of old Russian and Swedish coins, antique Byzantine crosses, Indian jewelry, and one of Chinese and Japanese curiosities. The last twenty years of his life were devoted to the collection of tobacco pipes of all nations and times. It included 13,000 examples from every quarter of the globe,—pipes from the pre-historic mounds of the Mississippi Valley, antique Mexican pipes, formerly the property of the Emperor Maximilian, the collection of North American Indian pipes formed by the traveler George Catlin, early pipes from England and all parts of Europe, pipes from Africa, Australia, Asia and the Pacific Islands. There were pipes of gold, of silver, of exquisitely modeled and orna-



(PORTRAIT FROM THE SHEFFIELD WEEKLY TELEGRAPH.)

mented porcelain, pipes beautifully inlaid, and thousands of examples, most curious and grotesque. The collection included exquisitely fashioned and enameled snuff-boxes, bottles, spoons, mills and rasps, fire strikers, tobacco pouches, and, in short, everything which related in any manner to the custom of smoking. The descriptive catalogues of the collection numbered twenty large volumes. He also formed a most complete and unique library of books relating to tobacco, consisting of about 500 volumes, and ranging in date from 1547 down to the present time. Business losses recently compelled him to part with his various possessions, which he did cheerfully and uncomplainingly. His great success in obtaining whatever he wanted was the result of his inborn kindness and suavity of manner. Several years before his death, which occurred at 61, he became almost totally blind, but his genial nature remained unruffled to the last.

Young Contributors' Department.*

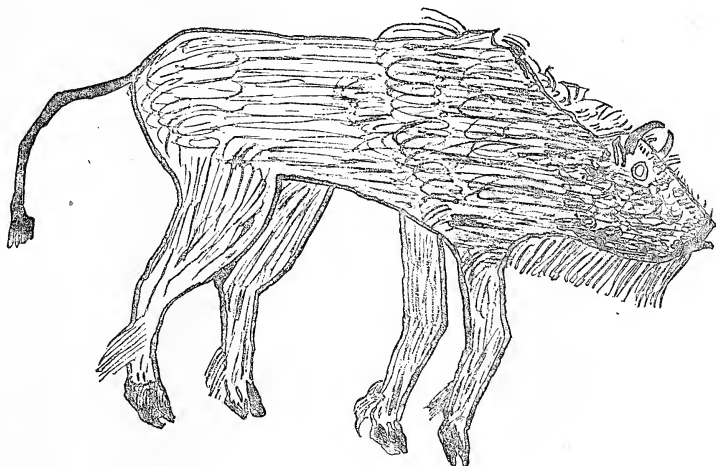
FOR THE MUSEUM.

THE BUFFALO (WITH ORIGINAL DRAWING).

BY BROOKS RED EAGLE (AGULA),

An Indian boy of 14, from Pine Ridge Agency, Dakota; only sixteen months in the East; now at the Educational Home, West Philadelphia, Pa.

I have seen a great many Buffaloes before I came here. The buffalo has two horns on the head and it has two eyes and has big head. The buffalo has four feet and four legs and a tail and has teeth. It can eat with teeth, and has two jaws and one chin. The buffalo has lots hair on the body; it makes them warm when the winter time, and



A BUFFALO.

the buffalo has two ears; it can hear with it, and can drink water and eat the grass every day, and the buffalo can run very fast when the Indians hunting. The buffalo has one tongue and has sharp horns; it can kill somebody and the buffalo lives out the west and the buffalos hair grow on the winter times. Buffalo has a nose, it can smell with it and they eat the green grass in the summer times, so they are fat, and the buffalos like to lay down on the ground when they are tired and they can swim on the water and can walk on the ground and some buffalos kill man and sometimes kill each other and the Indians like hunting the buffalos.

*Under this heading will be published short papers written by young naturalists, giving the results of original observation, and illustrated, when possible, by original drawings.

Natural History.

Zoölogy.—Amongst the recent arrivals at the Philadelphia Zoölogical Garden were two fine specimens of the zebu (Indian ox), a Bactrian camel, a jack-rabbit, two marmosets, a raccoon, a ring-necked parakeet, a mountain finch, a chaffinch, two mallard ducks, three Pekin ducks, a sickle-billed curlew, two little black-headed ducks, a turkey buzzard, a red-tailed hawk, a mountain blacksnake, a copper-head snake, two alligators, and an Egyptian ichneumon. The zebus and camel were born in the garden.

Dr. William D. Hartman, of West Chester, Pa., has in his possession some edible snails, still living, which he procured from Lord Byron's old garden at Geneva, Switzerland, in 1883.

We have received from southern California a most interesting collection of star-fishes and sea-urchins, some of which are rare. They will be described in an early number of this journal.

Ornithology and Oölogy.—THE BLUE JAY AS A PRACTICAL JOKER.—A gentleman in one of Ohio's inland towns is the happy possessor of a bald head. The other day he stepped out into the yard without his hat, when suddenly a jay darted down and struck him a blow on his shining pate. He then flew off to his companions, who evidently enjoyed the joke very much.—WILL C. PARSONS, in *The Young Oölogist*.

The anna humming-bird, according to one of our western correspondents, commenced nesting this season in February, in the vicinity of Santa Barbara, Cal.

Professor T. G. Gentry possesses an egg of the mallard duck which is of a dark chocolate color, and one of the crow, which is of a light green tint, without splotches.

The flicker or golden-winged woodpecker is sometimes a prolific layer. A female, in Chester County, Pa., was known to deposit over thirty eggs in one season; one egg was taken from the nest every day for a month, being invariably replaced by another the day following.

In the western portion of the United States, cow-birds are very abundant. It is a frequent occurrence to find an egg of this bird on the ground, far out on the Colorado plains. As there are no trees in that section, and consequently no nests of other birds, the cow-bunting has no alternative but to leave her eggs to the mercy of the elements.

The broad-tailed humming bird occurs abundantly in the extreme southwestern corner of Colorado. In the summer of 1875, five nests were found in one afternoon, within a space of 100 yards, each containing two eggs. The nests, which varied much in shape, were built in bushes, from 4 to 10 feet from the ground, and over, or in the vicinity of, a running brook.

Botany.—In a paper entitled *North American Geasters*, Mr. A. P. Morgan, in the *Journal of Mycology*, describes eighteen species of "star puff-balls."

CAMPTOSORUS RHIZOPHYLLUS, Link., commonly called the "walking-leaf" fern, has been found growing on a single rock on the Wissahickon, near Germantown, Pa. The spot is known to but three or four botanists.

Among the manuscript notes left by Dr. Engelmann at his decease, is an incomplete description of a new genus, of Euphorbiaceæ, for which he proposed the name of Tetracoccus. The material then being imperfect, the notes remained unfinished. Since then, complete specimens have been collected by C. R. Orcutt, of San Diego.—*West-American Scientist*.

On the western edge of British Guiana, near the Brazilian boundary, the Roraima mountain rises to a height of 5000 feet above the surrounding plain. This peak has hitherto been considered inaccessible; no one has been known to accomplish its circuit, and it has been believed to be a perpendicular sandstone cliff on all sides, capped, apparently, by a mass of foliage. The neighborhood is exceedingly rich in botanical specimens, and collectors have long desired to explore its summit in quest of new plants. The eminent naturalist, Mr. Everard F. im Thurn, has, at length, accomplished the ascent, in the interest of botany, and the announcement of his discoveries will be awaited with much interest.

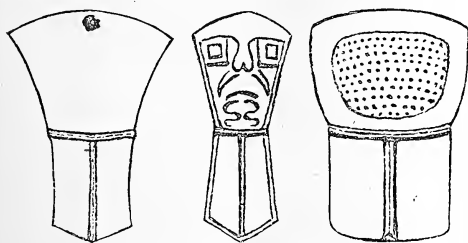
Archæology.

FOR THE MUSEUM.

COPPER MONEY OF THE HAIDA INDIANS.

BY JAMES DEANS.

Among various tribes of Indians on the coast of British Columbia and Southern Alaska, particularly the Haida Indians of Queen Charlotte's Islands, a copper-plate currency is used. These plates vary little in shape, but range in size from one and one-half inches to three feet in length. They are made of pure native copper, which is found on Copper River, near the junction of Alaska and British Columbia. A piece of the virgin metal is first heated and then hammered out, between two stones, until it is reduced to a plate of the required thinness, when it is cut into the conventional hatchet-head form. The majority of these pieces are ornamented with a T-shaped groove, which is formed in this wise: Some hard material (probably copper) made in the form of a T, is laid on a smooth stone. The sheet of copper is then heated, until soft enough to bend, and being laid over this T, is hammered until it takes the form of the T, being raised on one side and grooved on the other. Many of these coppers are painted or engraved with symbolical or totemic devices, as in the central one represented in the en-



HAIDA COPPER MONEY.

graving. The third figure gives the outline of a specimen of about two feet in length, having raised ornamentation on the upper portion, made to represent an Indian basket. The first figure shows a plain specimen, five inches long, which has been forwarded for examination. The value varies according to the size, one of two feet in length representing about \$500. Sixteen years ago, one of these pieces was worth fifty native three-cornered blankets. Of late years these Indians have purchased rolled

sheet copper in Victoria, B. C., which they cut without difficulty into pieces to suit themselves, but the value of such pieces is not more than half of those which have been beaten into shape in the ancient manner. Occasionally they resort to a species of counterfeiting by purchasing the rolled copper and beating it on rough stones and then painting it to resemble the ancient money.

The wealth of a Haida Indian is estimated by the number of coppers he possesses. One old chief, a few years ago, owned twenty-five or thirty of the old Copper River beaten ones, which he valued at several thousand dollars. When a wealthy Indian dies, it is customary to carve the number of coppers he accumulated during life on his mortuary column, and, in some instances, the pieces themselves are nailed to the grave-posts.

The Rev. and Mrs. R. W. Summers, of San Luis Obispo, recently discovered earthenware vessels in some of the ancient graves of the California coast. The fragments sent East for examination are of a rude character of ware, almost black in color, and entirely free from ornamentation. This is claimed to be the first pottery found in any quantity in these graves.

Another "inscribed" stone, somewhat resembling, in size and general appearance, the "*Cincinnati tablet*," has been found in Butler county, Ohio. The authenticity of the specimen is not doubted, but the characters (one of which, covering about one-quarter of the stone, bears some resemblance to a man's head) are not believed to possess any particular significance. Dr. E. H. Davis, one of the original explorers of the mounds, expressed to Dr. D. G. Brinton, some years ago, his belief that such "tablets" were merely stamps for ornamenting fabrics or portions of the human body.

In southeastern Utah, three large spherical pots or jars have been discovered, buried under a rock-shelter or retreat, in the neighborhood of ancient Pueblo ruins. Their mouths were covered with a large, flat stone. In one was found about 200 yards of rope, made, apparently, from the tough fibres or bark of the Indian hemp, and closely covered with a wrapping of feathers of dark gray color. In another was found about 100 yards of rabbit netting, made

probably, from the same fibre, and measuring about one yard in width. Whether these articles are very old may be doubted, but the report of the discovery comes to us on good authority. Such objects would, undoubtedly, remain in a fair state of preservation for many years, as the atmosphere in that section is equable, and rain is said never to fall. The samples sent to us for examination are certainly very interesting, and will receive a thorough examination.

An account of the discovery of a buried city, near Moberly, Mo., has been going the rounds of the newspapers, lately, in which many wonderful antiquities are described. The story has no foundation in fact, but was invented by an enterprising editor, to give notoriety to the place.

Philately.

FOR THE MUSEUM.

BLOOD'S DESPATCH.

Of the numerous local despatch companies which existed in the larger cities of the United States a quarter of a century ago, Blood's was probably the most celebrated. Daniel Otis Blood, the originator of the enterprise, was, in 1847, head clerk in the office of the Philadelphia *Public Ledger*, of which his half brother, Mr. William M. Swain, was one of the proprietors. About that time an office for the transaction of the new business was opened in the basement of No. 48 S. Third Street, below Chestnut, under the firm name of D. O. Blood & Co. Four boys were employed to deliver and collect



letters. The first stamp issued was the large square one (of which there were three varieties) representing a postman stepping over the roofs of houses. This was the only city stamp used for years.

After the death of Mr. Blood, the business was purchased from the heirs, on October 31, 1855, by Mr. Charles Kochersperger, who continued it, at 28 South Fifth Street, as Blood's Penny Post. A

younger brother of the new proprietor, Mr. Elbert Kochersperger, now living in Philadelphia, became a partner, and from him many of the following interesting facts, never before published, have been obtained.

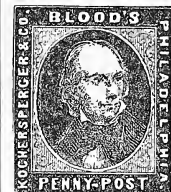
The dove stamp (two varieties) which is now so rare, succeeded the large square issue, but was never a favorite, and was discarded for another, which was soon

superseded by the small rectangular variety, which was used for several years. This was first printed plain and canceled with

ink, but afterwards printed in bronze and canceled with acid. The next variety to appear was the common circular portrait of Henry Clay, engraved by the Bank Note Co., on which appeared the firm name of Kochersperger & Co. Previous to this, a stamp with bust of Clay was engraved, but it was considered such an unsatisfactory likeness

that it was never used.

The latter is represented in the annexed engraving, several of the originals having been kindly furnished by Mr. Kochersperger. Several circular envelope stamps



appeared between 1850 and 1860, printed in red. The total number of varieties of Blood's Despatch stamps exceeded twenty.

For two or three years after the company was established, small advertising mottoes, printed on red paper, were attached to



letters and circulars passing through the office, but the practice was discontinued because of objection on the part of customers. These mottoes are now very rare. Mr.



Kochersperger has preserved a gummed sheet containing ninety-two of them, all different, which is probably the only one now in existence. As they are curious and interesting, and throw considerable light on the history of the company, several of them are given below:—

Remember, that Blood's City Despatch takes Letters, Papers and Small Parcels from one extremity of the City to the other, at the low rate of two cents each.

The name D. O. Blood & Co. will be found in three places on all the boxes of Blood's City Despatch.

Blood & Co.'s City Despatch Office is at 48 South Third Street, above Girard Bank.

EXPRESS is good.
DESPATCH is better.
And it's through BLOOD'S
I send this letter.

Thro' Blood's the passage,
The only way
To send a message
Three times a day.

We wish you to know that Uncle Sam's laws
Keep D. O. Blood & Co. from entering his jaws;
Kensington and Spring Garden excepted, you know,
By the City Despatch of friends Blood & Co.

The prices of Blood's City Despatch stamps are 2 cts. each, 20 cts. a dozen, or 8 dozen for \$1.00.

Blood & Co.'s City Despatch makes three deliveries each day, 7 and 10 A. M. and 2½ P. M.

The BOX STATIONS of Blood & Co.'s City Despatch are designated by signs reading thus: "D. O. Blood & Co.'s City Despatch—Box in the Store."

Letters are sure to go
Through D. O. Blood & Co.

The stamps of Blood's City Despatch are 20 cents a dozen for City Letters and 12 cents a dozen for Post-office Letters.

The office was next moved to the "Arcade," on Chestnut street, between 6th and 7th, where it remained about four years. In 1860-62 the offices were located at 26 and 28 S. Sixth street, where eight carriers were employed. The number of daily deliveries and collections was increased to four.

After suit had been entered against city Despatch Companies, by the then Postmaster-General, Mr. Hall, the business was prostrated. On November 20, 1860, the U.S. Courts decided it to be legal, but in 1861 Congress passed a law declaring the streets of a city post roads, and the business was then purchased by the Government. On the morning of January 11, 1862, Blood's Penny Post made its last delivery.

Numismatics.

NOTES ON THE STANDISH BARRY THREE PENCE.

BY HENRY PHILLIPS, JR.

"A curious little silver token, of which we have no history, is supposed to have made its appearance in Baltimore, Maryland, in 1790. It is apparently a private issue by Standish Barry, and represents the value of three pence. A curious feature in this

token is the preciseness of its date—July 4—90. Whether any especial celebration of the anniversary of American Independence was observed in 1790, is unknown to us; if there was, this silver token was probably issued in commemoration of that event."*



It cannot be ascertained that any special celebration was held on that date. According to *Scharf's Chronicles of Baltimore* (p. 248, edit. 1874), on the prospect of a war with France, in 1798, the "Sans Culotte" (a military organization) changed its name to that of "The Baltimore Independent Blues," and one Standish Barry was appointed lieutenant.

In the Baltimore directories, from 1796 to 1824, the name of Standish Barry occurs as a clock and watchmaker, merchant, silversmith, grocer, sugar refiner, etc. There may have been several persons of that name.

In the collection of autographs of Mr. Robert C. Davis, of Philadelphia, there is a document dated January 27th, 1825, signed, "Standish Barry, Sheriff of Baltimore county." It is not possible to say whether this is the same person or not. In the Baltimore directory for 1867-8 the name of Standish Barry, currier, is found. The name seems to have been a rather common one in that locality, but it cannot be ascertained that any one of unusual prominence ever bore it. None of the Baltimore papers for the month of July, 1790, mentions any one of that name, or any special event worthy of commemoration in a silver coin. It is supposed, therefore, that the piece is merely the result of Fourth of July patriotism. This token is exceedingly scarce, a good specimen being valued from \$25.00 upwards.

At a recent meeting of the Numismatic Society of London, England, a jetton, bearing a sprig of thistle and rose combined, with the inscription, BEATI PACIFICI was exhibited. It was supposed to be a piece of James I.

Thirty-six silver pennies of William II, found in the vicinity, were recently exhibited at a meeting of the York (England) Field Naturalists' and Scientific Society.

* Crosby.

The early coins of Canada were of French origin. In 1670 Louis XIV issued a five sous silver piece; also a copper double; on the reverse, a large Roman "L," crowned, divides the date, 1670, with the letter "A," Paris mint mark. On the obverse, *Doublé de L'Amerique Française*, with the *fleur de lis* on both sides.—*Canadian Philatelist*.

A discovery of early coins (numbering 707) was recently made in France, in the Vicomté of Bearn, in connection with other relics, in two vases bearing marks of incineration. The coins ranged in date from 964 to 1138 A. D.

Collectors and Collections.

Mr. Wm. A. Jefferis, of 127 East Twenty-third street, New York, who has, for many years, been an enthusiastic philatelist, is the possessor of several valuable collections, as follows: 1. A series of used stamps, numbering 4012 varieties; 2. A series of uncanceled stamps, numbering 1169; 3. A collection of new stamped envelopes, containing 125 varieties; 4. A series of 38 unused newspaper wrappers and bands.

Dr. Joseph Jackson Howard, editor of the *Miscellanea Genealogica et Heraldica*, London, England, has a collection of 20,000 book-plates, the accumulations of some forty years. Amongst many old, scarce and curious examples, are copies of the very rare armorial book-plate of David Garrick.

Mr. Andrew E. Douglass, of New York City, possesses, probably, the largest collection of ancient tobacco-pipes in America. The series contains about 500 examples, 260, or more than half, of which are the handiwork of the American aborigines. The remainder are early European. Of the native American specimens, many are most elaborate and curious sculptures.

A remarkably complete collection of Papal medals, now on exhibition in the Pennsylvania Museum of Art, Philadelphia, is the property of Thomas Hockley, Esq. There are 764 specimens, ranging from Pope Martin V (1415), to Pius IX, two of which were engraved by Benvenuto Cellini.

A valuable collection of fungi is owned by Mr. Jerome B. Gray, of West Chester, Pa. Amongst 1000 different species are many specimens of great rarity.

The largest portion of General Washington's library, consisting of some eighty valuable autograph volumes, is now in the possession of Mr. John R. Baker, of Philadelphia, Pa.

One of the most complete collections of old Wedgwood ever formed by any collector, is that of T. Shadford Walker, Esq., of Liverpool, England, consisting of about 750 pieces, many of them of the best period—previous to 1795. The series includes a large number of portrait medallions of celebrities, cameos, plaques, vases and figures in various colors, and a complete set of chessmen designed by Flaxman. We are informed that the collection is about to be sold.

Mr. Wm. W. Jefferis, of Philadelphia, an ardent collector of minerals, is the owner of one of the finest collections in the State of Pennsylvania. The labels of this cabinet run up to 10,045, the number of specimens being much greater.

Hon. Washington Townsend, of West Chester, Pa., is the owner of one of the largest and most valuable collections of Continental and Colonial paper money in existence.

One of the most valuable collections of coins in the world is that of the Royal Cabinet in Berlin, which, in 1881, consisted of over 200,000 specimens, including 33,000 ancient Roman, 57,000 early Greek, 90,000 mediæval and modern coins and medals, and about 28,000 oriental pieces. This number has been largely increased during the past three years. The director is Dr. Julius Friedländer.

The Museum of Art and History in the University of Michigan, at Ann Arbor, contains, amongst many valuable groups of objects, 900 ancient Greek and Roman coins, a large series of casts of historical medallions, and a fine collection of Peruvian antiquities and interesting ethnological objects from Formosa, China and Japan. Mr. Henry S. Frieze is the curator.

The numismatic collection of the National Library of Paris contains some 250,000 coins and medals. This is one of the largest public collections in existence.

The Public Museum of the city of Milwaukee, Wis., contains 11,198 zoölogical specimens, 5000 botanical specimens, 2921 ethnological objects, 2439 fossils, and 4532 minerals, 1630 coins and medals and 100 pieces of Confederate and other paper money. Amongst the ethnological collection are valuable series of Swiss lacustrine and Esquimaux relics, and a number of valuable copper implements, some of which are figured in Foster's *Prehistoric Races*. The custodian is Mr. Carl Doerffinger.

The Museum of the city of Winterthur, Switzerland, contains 20,000 Swiss coins and medals, a gift from Dr. F. Imhoof-Blumer, the director, to his native city, in 1871.

RARITIES IN VARIOUS COLLECTIONS.

Mr. Wm. W. Jefferis, of Philadelphia, possesses the original crystals of *clinochlore* and *phlogopite* figured in Dana's *Mineralogy*. He also has a large crystal of calcite, from Rossie, N. Y., which contains, in one of its cavities, nearly half a pint of water; also the finest crystallized specimen of diaspore ever found, from Chester Co., Pa.

A unique chimney-piece and fire place, consisting of 108 curious old Dutch tiles, is owned by Mr. S. L. Frey, of Palatine Bridge, N. Y.

Mr. Robert Coulton Davis, of Philadelphia, possesses an uncirculated silver dollar of 1804; also a restrike of the same.

Four volumes of Blackstone's Commentaries, printed by Robert Bell, Philadelphia, 1771, formerly owned by Major-Gen. Anthony Wayne, and containing his autograph, are now in the library of Mr. E. A. Barber, of Philadelphia.

The Numismatic and Antiquarian Society of Philadelphia recently procured a series of about 30 large amber beads from prehistoric graves in Northern Prussia. Only 14 other specimens (9 in the Smithsonian and 5 in a private collection) are known in the United States.

A lady in West Chester, Pa., possesses some fine old pieces of Delft pottery, amongst which is a large plaque, with polychrome decoration, in a state of perfect preservation.

In the Bloomfield Moore collection, Memorial Hall, Philadelphia, is an unusually fine Lowestoft punch-bowl. It measures over 20 inches in diameter, and is decorated with a gold band, one and one-half inches wide, on the outer rim, with wreath of variously colored flowers. Clusters of flowers appear at intervals around the sides. In the plain white interior are represented six documents with seals, printed in black, in old German text.

RECENT SALES.

A large collection of Confederate Treasury notes, etc., catalogued by Mr. Lyman H. Low, was sold by auction on March 26th last, by Messrs. Bangs & Co., New York. A \$500 issue of 1861 (written date), Montgomery, with drove of cattle crossing brook, uncirculated, the rarest of the series, brought \$11.00; one of \$1000, with busts of Calhoun and Andrew Jackson, canceled, \$10.25; other examples brought \$4.05, \$3.50, \$3.20 and \$2.00, respectively. A \$100 issue of 1862 (written date), J. T. Paterson, Columbia, S. C., with *green back*, very rare, sold for \$21. Three Confederate bonds of 1861 (\$100, \$500 and \$1000), registered, with busts of Jackson, Calhoun and Davis, printed by *Am. Bank Note Co.*, New Orleans, sold for \$2.25; a 50c. U. S. fractional note, with bust of Gen. Spinner (carmine back), *without signatures*, issued by mistake, \$9.25; a set of four pieces (5, 10, 25 and 50 cts.), "postage currency," perforated edges, "ABCo" on reverse, \$1.60; the 25 and 50c. bust of Fessenden, Justice seated, values on solid bronze ground, \$2.50; an essay, design for "postage currency," picture of 1863 half dol., black, obv. and rev., broadside, \$4.00.

At J. W. Haseltine's sale of bric-a-brac, which took place in Philadelphia, on March 30th last, postage stamps brought the best prices. One lot of 21 boxes, of common varieties, sold at \$115.00. Another lot, of the rarer varieties, brought \$125.00. A collection of about 20,000 war envelopes went for \$26.00. A large series of autograph letters and

papers, mostly of noted men of Revolutionary times (numbering probably 1000 pieces), was sacrificed at \$34.00.

The coins and Indian relics brought much less. A collection of mound builders' vessels, pipes, axes, pestles, ceremonial stones and gouges was sold for \$10.50. A South Sea Island paddle, elaborately carved, went for \$7.50. A case of medals and tokens, numbering about 350 pieces, sold for \$11.00, and a similar lot for \$15.00. A silver "Hard Times" token of 1837, of which only three or four are known in collections, sold for \$15.00. Copper cents of 1793 and 1799, with many other rare copper and silver coins and many pieces of paper currency, were included in large lots, which sold for nominal sums.

On April 9th, at a coin sale in Philadelphia, a \$2.50 gold piece of 1796 brought \$55.50; a \$50.00 California gold piece, \$59.00; a 1794 U. S. dollar, \$22.00; another of 1839, \$25.00; a half dol. of 1797, \$53.00, and a dime of 1805, \$10.25.

MAGAZINES AND EXCHANGES.

The first number of *The American Journal of Archaeology*, a 'quarterly publication, has appeared. It is devoted almost exclusively to classical archaeology, and contains three heliotype plates representing vases from Alexandria, a side portal of Notre Dame, Paris, and statues from the North porch of Chartres Cathedral. The initial number impresses one as being rather too heavy for the majority of American students, the departments of Prehistoric and American Archaeology not having, as yet, been fully organized.

The *Miscellanea Genealogica et Heraldica* (London), for April, contains a beautifully illuminated double-page plate, a fac-simile of the "Confirmation of Arms and Grant of Crest by William Henry Clarenceux, to Gayus Dyxon, of Tonbridge, 1565," from the original in the possession of the Rev. Wm. M. Oliver, M.A.

One of the most enterprising philatelic papers is the *Illustrirtes Briefmarken Journal* (Illustrated Stamp Journal). The January number is a neatly printed pamphlet of 24 pages, containing upwards of

50 colored fac-similes of foreign stamps and a genuine unused 6 schilling Heligoland. While the colored engravings are excellent as illustrations, and convey a good idea of the originals, they are not so finely executed as to be likely to deceive. Published by Gebrüder Senf, Leipzig.

Smithsonian Contributions to Knowledge, No. 509, *Prehistoric Fishing in Europe and North America*, by Charles Rau, is a quarto of 335 pages, containing 405 illustrations. It is a most valuable and exhaustive treatise, which will be reviewed in our next number.

Elephant Pipes in the Museum of the Academy of Natural Sciences, Davenport, Iowa, is a pamphlet of 40 pages, by Charles E. Putnam, just published.

The Journal of Mycology is a new monthly devoted to the study of Fungi. The February number contains a valuable article on the *Enumeration of the North American Cercosporæ*, by the well-known students of Cryptogamic Botany, J. B. Ellis and Benj. M. Everhart. The Journal is published by Prof. W. A. Kellerman, at Manhattan, Kans.

The International Collectors' Guide, published by W. G. Whilden, Jr., Pelzer, South Carolina, is a neat little pamphlet containing much interesting information about the stamps of the Southern Confederacy, historical facts relating to early posts, etc., and a "postage stamp photograph" of Mr. L. W. Durbin, the Philadelphia stamp dealer.

The Agassiz Association.

ST. GEORGE'S HALL, REISTERSTOWN, MD.,
CHAPTER 598,
March 24th, 1885.

To the Editor of THE MUSEUM:

DEAR SIR:—Our Chapter, for the past four months, has been studying mineralogy. We have explored this country around for miles, and have collected a fair cabinet of Baltimore county minerals. There are two mines of iron ore not far from here

—a hematite and a chromite—which have afforded us plenty of food for thought and wonder, especially the rocks at the hematite mine. Associated with the iron ore is a great deal of chalcedony, and it is curious to note the great varieties of form, structure and color assumed by the quartz rock.

The agate is especially peculiar, forming often on the outside of the rock, like lace-work or tangled cords, and resembles flos-ferri or aragonite, for which I first mistook it.

At present I am studying the mode of formation of the large boulders of hornblende rock that one may see all along the Western Maryland Railroad. In regard to the origin of these rocks, scientists hold different views, one of the most popular being, I believe, that they are of glacial origin. Their true origin was pointed out to me by Dr. H. Lawrence, of Baltimore, and a patient study of them has convinced me that he is right. They are formed *in the soil*. If one digs in the ground where these boulders abound, he will find hard lumps of earth with nuclei of hornblende at the centre, in every stage of development, from the size of a pin's head to that of an ostrich's egg. They are formed precisely as all other concretions are, drawing their material around a centre from the surrounding earth, as illustrated in the geode, and the boulders found in iron ore mines.

Is it an ascertained fact that quartz has sometimes cleavage, or a tendency that way? Mr. Dana mentions its total lack of cleavage as one of its main characteristics. I have in my possession a piece of white quartz that I found on the shore of the Patuxent River, near its mouth, which shows a strong tendency towards cleavage. It is an imperfect rhomboid, and, when struck three times with a hammer, broke into planes parallel to each other and its smaller faces. It has at the centre, running lengthwise through it, like the heart of a tree, another variety of quartz of a darker hue and a more compact texture. Will you be kind enough to put the query whether anything of the kind has been observed before?

Is it known that the excrescences, some of them as large as one's fist, seen on the trunks and limbs of the gum and oak, are made and inhabited by a winged ant, not larger than the gnat? They burrow in the excrescence and line their snug little houses with a shelly substance not unlike that of the teredo

or ship-worm. This is new to me, having only discovered it within the past week, but it may be old to your readers.

ALLEN B. QUINAN.

April 20th, 1885.

To the Editor of THE MUSEUM:

DEAR SIR:—This Chapter has been organized about five months. We have increased our membership since our organization, and have also started a library. All the members are interested in the work. We hope to make a good collection this season, for which we are preparing a cabinet. We wish you success in the publication of THE MUSEUM, and hope it will be of benefit to the A. A.

Yours truly,

WILLIE H. HUGG,

Sec'y Chap. 762, Balto., Md.

CHAPTERS RECENTLY ORGANIZED.

- No. 810 (A.) 30 members, Sec'y, Mrs. E. M. Husted, Orchard Park, N. Y.
 No. 811 (A.) 7 members, Sec'y, C. S. Brownell, Nyack-on-Hudson, N. Y.
 No. 812 (C.) 24 members, Sec'y, Amos Spencer, Davenport, Iowa.
 No. 813 (A.) 5 members, Sec'y, Richard M. Gibson, Waupaca, Wis.
 No. 814 (A.) 4 members, Sec'y, Frank Hersey, Roxbury, Mass.
 No. 815 (M.) 4 members, Sec'y, H. S. Hadden, Brooklyn, N. Y.
 No. 816 (A.) 5 members, Sec'y, Rob't L. Raymond, Cambridge, Mass.
 No. 817 (F.) 8 members, Sec'y, W. P. Cresson, Jr., Philadelphia, Pa.
 No. 818 (D.) 8 members, Sec'y, Pennington Satterthwaite, Newark, N. J.
 No. 819 (A.) 10 members, Sec'y, Fred. A. Menge, Hinsdale, Ill.
 No. 820 (G.) 4 members, Sec'y, T. H. Fay (Box 60), Boston, Mass.

Why do not some of the Chapters of the Agassiz Association, which are situated in favorable localities, take up the study of American archæology as a specialty? The subject is of the most engrossing interest. No other branch of science presents such a fruitful field for original research.

THE MUSEUM EXCHANGE.

[Offers of exchange from subscribers, not exceeding twenty words each, will be printed in this department.]

Cecropia, *promethia*, *cynthia* and *polyphemus* cocoons for others. *Imperialis Lunar* and *Io* especially desired. H. W. FURNISS, 327 W. North St., Indianapolis, Ind.

Minerals, petrifications and curiosities for birds' eggs, drills or blow-pipes. WILLIE H. HUGG, 90 N. Paca St., Baltimore, Md.

Indian relics, shells, corals or minerals for any fine museum specimens. R. W. MERCER, 147 Central Ave., Cincinnati, Ohio.

Indian relics, old papers and pamphlets, autographs and curiosities for antique or curious fans. M., Lock Box 22, Philadelphia, Pa.

Chapter 762 would like to correspond with other chapters, with a view to exchange. WILLIE H. HUGG, Sec'y, 90 N. Paca St., Baltimore, Md.

ANSWERS TO CORRESPONDENTS.

H. R. J.—The pink "moss" which you send is a species of lichen, the botanical name of which is *Baeomyces roseus*, Pers. It grows abundantly on rocky or clayey banks.

WILLIE L.—An excellent little book, such as you desire, is "The History of England in Rhyme," by Rob't C. Adams. This contains, in 30 pages, the dates of all notable events in British history.

J. R. N.—Your coin is a silver penny of Edward I.

F. L. C.—From your description, the specimen would seem to be Lowestoft. Such pieces, of the last century, can often be picked up for one or two dollars.

HARRY C. W.—Genuine Indian work can be distinguished by the *sinew* used as thread, and the porcupine quill ornamentation.

G. W. S.—The stamp is a counterfeit.

More than 800 autographs were sold by Messrs. List & Francke, of Leipzig, on the 8th of April last. Amongst many valuable documents were letters from the following scientists: Humboldt, Keppler, Linnaeus, Agardh and DeCandolle. There were also letters from Beethoven, Ole Bull, Cherubini, Haydn, Abt, Mendelssohn, Schubert, Schumann, Wagner and Weber.

Editorial.

The initial number of THE MUSEUM is issued under peculiarly favorable circumstances. The idea of combining under one cover the best features of a first-class journal of science for youth, and a guide for collectors of all classes, has been greeted on all sides with unexpected favor. Words of encouragement and offers of assistance have come to us from all quarters of the Union, from Canada, from Mexico, from South America, from Europe and from far-away India. Amongst our contributors are already enrolled the names of many of the most eminent men of science and famous collectors, so that the literary success of the enterprise is insured in advance. It only remains to secure a reasonable degree of pecuniary support to place the publication on a permanent footing. So soon as the subscription list shall warrant, the size of the journal will be doubled, and a fair proportion of the surplus receipts will be devoted to increasing the number and improving the quality of the illustrations.

We believe there is a wide field of usefulness for a magazine of this class, and we feel that our efforts to produce one will be appreciated by thousands of intelligent amateurs and friends of science. Young collectors and naturalists have long felt the want of just such a medium of intercommunication.

But, while it shall be the chief aim of the publishers to further the interests of *young* investigators, THE MUSEUM will, nevertheless, prove invaluable to students and specialists of broader experience. All collectors will find in each number much that is new and interesting. The latest news on all subjects relating to collectors and collections will be furnished. We will not ask our subscribers, however, to rely alone on our promises. We prefer to have the journal speak for itself.

Boys and girls, will you assist us in making THE MUSEUM a model magazine for wide-awake young people? This you can do by speaking a good word for us whenever you have the opportunity. Interest your friends in the undertaking; send us subscribers, and we will give you a periodical worthy of your support.

The attention of young collectors is particularly called to our list of premiums.

RICHMOND DIATOMS!!

Twelve superb slides, the result of over ten years' collection and study, giving a completely unique showing of this celebrated deposit, with a rich specimen of the natural earth, postpaid, \$4.00; single specimens, 50 cents; descriptive circulars and catalogue, 4 cents.

C. L. PETICOLAS,

635 Eighth St., North.

RICHMOND, VA.



FOR SALE

Indian Relics, Minerals, Fossils, Sea Shells and Coral, Coins, Stamps, Confederate Money, Autographs, Old Arms, Idols, Bronzes, and all Curiosities. Send stamps for price lists, especially prices paid for rare Coins, etc.

R. W. MERCER,

147 Central Avenue,

CINCINNATI, O.

WANTED!

Autographs, Rare Manuscripts, Curiosities in Literature, Curiosities, Relics of Historical Interest; will pay cash; also curious books or rare bindings.

Address

C. F. GUNTHER,

78 Madison Street,

CHICAGO, ILL.

"IN-ternational Collectors' Guide,"

25 CENTS.

W. G. WHILDEN, JR.,

PELZER, S. C.

THE HERMES International Advertiser OF PHILATELY AND NUMISMATICS.

M. ISENSTEIN & CO.,

63 East Fourth Street,

NEW YORK CITY,

U. S. A.

The *Hermes* is sent free of charge to all interests of the stamp and coin trade.

LAST ISSUE 9000 COPIES.

We charge for one year 12 cents—the net postage we have to pay.

ADVERTISING RATES:

(Nonpareil type measure, 12 lines to one inch, or the same amount of space)

8 CENTS PER LINE.

½ Page, \$13.00.

1 Page, \$24.00.

Strictly Net Cash in Advance.

Money orders, etc., must be made payable at Station D, New York City, P. O., to the order of M. Isenstein & Co., 63 East 4th St., New York City.

We BUY COINS of every description. Send them on approval to

M. ISENSTEIN & CO.,

63 East Fourth Street,

NEW YORK CITY.

F. RATHBONE,

(Late of Brighton)

Wedgwood Art Pottery,

20 ALFRED PLACE, WEST,

SOUTH KENSINGTON, LONDON, S. W.

Mr. Rathbone continues to deal only in Old and Modern Wedgwood, and to guarantee the quality of every piece offered for sale.

OLD WEDGWOOD PURCHASED.

COINS AND MEDALS.

ANCIENT, BYZANTINE, MEDIAEVAL AND MODERN.

An authentic attribution and full description accompanies every coin which I offer at and above 10 cents.

Direct importations from the leading coin marts of Europe.

The most complete and best assorted stock in America.

Invoices of Coins submitted on approval to parties furnishing satisfactory references.

Catalogues of Numismatic works on sale, 15 cents, postpaid.

Coin price list and circulars, upon receipt of postage.

LYMAN H. LOW,

NUMISMATIST,

Season of 1885.

388 Broadway, New York.



BURPEE'S SEEDS ARE WARRANTED FIRST-CLASS IN EVERY RESPECT. FEW EQUAL —NONE BETTER— FARM ANNUAL FOR 1885

Will be sent FREE to all who write for it. It is a Handsome Book of 120 pages, hundreds of beautiful new illustrations, two Colored Plates, and tells all about the best Farm and Garden Seeds, including IMPORTANT Novelties of Real Merit. Farmers, Market Gardeners, and Planters who want the BEST SEEDS at the LOWEST PRICES send address on a postal to

W. ATLEE BURPEE & CO., PHILADELPHIA, PA.



The Museum Premiums.

Desiring to bring the Journal to the notice of all who are engaged in collecting, or are interested in the study of Natural History, the publishers of *The Museum* make the following liberal offers :—

1. **For Three Subscriptions**, one dozen Slides for Microscope, French Educational Objects ; or,
2. Six Cabinet Photographs of Peruvian and Chiriqui Antiquities, Ancient Vases, Idols and Gold and Silver Ornaments ; or,
3. One large Pocket Magnifying Glass, hard rubber case, two lens (1 and 1¼ inch diameter).
4. **For Five Subscriptions**, a collection of 50 different species of foreign and domestic Mosses, correctly named.
5. **For Six Subscriptions**, a collection of 100 small specimens of Minerals, all different, correctly named ; or,
6. A copy of the Rev. J. G. Wood's "Common Objects of the Microscope" (containing 400 engravings, in colors) and a *Boy's Compound Microscope*, packed in a polished walnut case.
7. **For Fifteen Subscriptions**, *The Museum* for one year ; a fine collection of pressed and correctly named foreign and American Mosses ; a copy of Wood's book on the Microscope and a *Universal Household Microscope*, packed in a polished mahogany case.
8. **For One Hundred Subscriptions**, a *Histological Binocular Microscope*, 14 inches in height, with necessary accessories, in an upright mahogany case. This is a splendid \$75.00 instrument.

Transportation on any of the first five premiums will be prepaid. Expressage on Premiums 6, 7 and 8 must be at the expense of addressees. In specifying premiums desired, please refer to the numbers. Having the addresses, and in most cases, the price lists, of 2000 dealers in Collectors' supplies, in all parts of the world, we enjoy unusual facilities for procuring collections of objects of all classes, at the lowest rates. We shall take pleasure in furnishing an estimate of the number of subscriptions required to obtain anything desired by any collector. It should be understood, however, that we are not dealers, and in no case offer objects for sale.

Young collectors should set to work at once to secure, without expense, some of the above mentioned prizes. Subscriptions should commence as early as possible, in order that no numbers of the Journal may be lost.

Address all communications to

The Editor of THE MUSEUM,

No. 1220 Sansom St.,

Lock Box 22.

PHILADELPHIA, PA.



Entered at the Philadelphia Post Office as Second-class Matter.

SUBSCRIPTION PRICE, \$1.50 PER YEAR. SINGLE COPY, 15 CENTS.

THE MUSEUM.

A new, Illustrated Journal, under the Editorial Management of Edwin AtLee Barber, published, on the first of every month, in the interests of Young Naturalists and Collectors of all Classes.

Amongst the Contributors to the early numbers will be

DR. DANIEL G. BRINTON,
PROF. EDWARD D. COPE,
MR. HENRY PHILLIPS, Jr.,
PROF. THOMAS G. GENTRY,
PROF. J. T. ROTHROCK,
DR. JOSEPH LEIDY,

PROF. THOMAS C. PORTER,
DR. CHAS. C. ABBOTT,
MR. HERMAN STRECKER,
MR. ERNEST INGERSOLL,
MR. F. RATHBONE, London, Eng.,
PROF. C. F. HOLDER,

The MARQUIS DE NADAILLAC, of Paris, France,
CAPT. R. C. TEMPLE, of India,

and many other prominent Scientists and Collectors.

The specific object of the Publishers of *The Museum* is to supply a popular demand of our Youth for a periodical of elevated tone, which shall be, at once, a recognized medium of intercommunication and an instructor in popular science.

Subscription Price, \$1.50 per Year. To Foreign Countries, \$1.60.
Single Copy, 15 Cents.

ADVERTISING RATES MADE KNOWN ON APPLICATION.

PUBLICATION OFFICE, 1220 Sansom Street, Philadelphia, Pa.

PRIZES FOR YOUNG CONTRIBUTORS.

An important feature of *The Museum* will be the Young Contributors' Department. For the purpose of encouraging young investigators in the arts of composition and drawing, the publishers of the journal offer the following special prizes for the best essays on the subjects mentioned:—

SUBJECTS OF ESSAYS.	COMPETITION CLOSES.	PRIZES OFFERED.
1. On the collection of Autographs and Manuscripts.	July 1st.	An old book from the original library of Maj. Gen. Anthony Wayne, containing his autograph (rare).
2. Botany (with original drawings)	July 1st.	A collection of 50 different Mosses, correctly named, domestic and foreign, including rare and curious species.
3. On the Habits and Life History of the "Seventeen Year Locust" (with original drawings).	August 1st.	A collection of 50 different species of Insects, correctly named.
4. Mineralogy	August 1st.	A collection of 50 different Minerals, labeled.
5. Ornithology and Oölogy (with original sketches).	September 1st.	Nest and Eggs of Humming-bird.
6. Star Fishes (with original drawings).	September 1st.	Five different kinds of Radiates, including rare species.
7. On the Origin and Use of the Bird-shaped Stone, or Amulet, of the N. A. Indians.	October 1st.	A series of ancient shell-beads from California graves.

RULES.

1. Essays must be written on single sheets and on one side of the paper only. These sheets must be attached securely at the upper right-hand corner.
2. A fictitious name only must be signed to each essay.
3. This must be accompanied by a small sealed envelope, containing the correct name, age (when under 21) and address of the writer. On the outside must be written only the name which is signed to the essay.
4. Each essay must be accompanied by postage for its return to the writer.
5. No one will be permitted to compete who is not a subscriber.
6. Essays must be written by the contestants, without assistance from any one. The drawings must also be made by the writers, from nature.
7. The facts presented must be the results of original observation, and not taken from books or information derived from other sources.
8. No essay must contain more than 800 words, nor be accompanied by more than three illustrations.

Prize essays will be published in *The Museum*.
All communications should be addressed to

THE EDITOR OF "THE MUSEUM,"

P. O. Box 22, Philadelphia, Pa.

Announcement!

The next number of **THE MUSEUM** will contain, in addition to the Regular Departments, **A FOSSIL GIANT**, with full-page plate, by **Prof. Edward D. Cope**, the eminent Palæontologist; an illustrated article, of great interest, by the Rev. M. Eells, of Washington Territory, on **INDIAN IDOLS**; some curious facts about **Umbrellas in History**, by Mr. Henry Phillips, Jr., and a list of Archæologists (classified in a unique manner) who have in their collections certain rare forms of ancient Indian Tobacco Pipes.

There will also be published, in the same number, the prize essay on **PHILATELY**.

FORTHCOMING NUMBERS OF THE MUSEUM

Will contain, among other attractions, the following illustrated papers:—

An article on **ZOOLOGY**, by **Prof. Joseph Leidy**, the distinguished Comparative Anatomist.

ANTIQUÉ JAPANESE TOBACCO PIPES, by **Edwin A. Barber**.

ON THE COLLECTION OF OLD WEDGWOOD CHINA, by **Mr. Fred. Rathbone**, of London, England, the best authority on this noted ware.

BOTANY, by **Prof. T. C. Porter**, of Lafayette College, Easton, Pa.

BIRD-HISTORY, by **Dr. Charles C. Abbott**, of Trenton, N. J.

THE STORY OF A BROKEN STONE, by the same writer.

EUROPEAN ARCHÆOLOGY, by the **Marquis de Nadaillac**, of Paris, France, one of the most eminent Anthropologists in the world.

COINS OF INDIA, by **Captain R. C. Temple**, Cantonment Magistrate at Ambala, British India.

MOSESSES AND HOW TO COLLECT THEM, with illustrations of curious species, by **Edwin A. Barber**.


CRYPTOGAMIC BOTANY, by **Prof. J. T. Rothrock**, of the University of Penn'a.

CURIOSITIES IN COINS, by **Mr. Henry Phillips, Jr.**, an eminent Numismatist and Antiquary, of Philadelphia.

CURIOUS BUTTERFLIES OF THE WORLD, by **Mr. Herman Strecker**, of Reading Pa., the largest collector in the world.

Other illustrated papers, by noted scientists, are also in hand, or promised, on **Indian Pipes, Autographs, Pottery of American Races, Sea Weed, Coins, Stamps, Birds' Eggs and Minerals**.

SPECIAL OFFER.

 To any boy or girl who will send us the names of four new subscribers and \$6.00, we will send a copy of **THE MUSEUM** free, for one year.

CLUB RATES:

FIVE yearly subscriptions for \$6.00, or \$1.20 each.

TEN yearly subscriptions for 11.00, or 1.10 each.

TWENTY yearly subscriptions for 20.00, or 1.00 each.

A limited number of specimen copies of **THE MUSEUM** will be sent out this month to non-subscribers who are known to be interested in one or more of the subjects to which the journal is devoted. If each person who receives a copy will carefully examine its contents, or kindly hand it to a collector or naturalist, the Editor will esteem it an especial favor. It is believed that the journal will commend itself to all who may have the opportunity of glancing over its pages. Each number contains valuable information which cannot be found in any other publication. The scope of **THE MUSEUM** is unique. Collectors, Public Museums and Scientific Societies will find **THE MUSEUM** invaluable in procuring useful information, which cannot be obtained from any other source, relating to collectors and collections in all parts of the world. We already have a large amount of unpublished material on hand, and are receiving, daily, valuable additions, which will be published as rapidly as our space will permit.

AGENTS ARE WANTED IN EVERY TOWN AND CITY.

WM. F. FELL & CO.,

✻PRINTERS✻

Nos. 1220-24 SANSOM STREET, PHILADELPHIA, PA.

BRIEFS, PAPER BOOKS, BLANKS AND LEGAL PRINTING GENERALLY.

Special attention given to the Printing of

BOOKS, MEDICAL PUBLICATIONS, GENEALOGICAL, NUMISMATIC, PHILATELIC, NATURAL HISTORY AND AMATEUR PAPERS.

ARTISTIC WORK AND FINE MAGAZINE PRINTING A SPECIALTY.

ESTIMATES CHEERFULLY FURNISHED ON APPLICATION.

FIRE-PROOF VAULTS FOR } **Printers of "The Museum."** { MECHANICAL DETAILS RECEIVE
STORAGE OF PLATES. } OUR PERSONAL SUPERVISION.

The American Antiquarian and Oriental Journal.

AN ILLUSTRATED MAGAZINE, DEVOTED TO ARCHÆOLOGY AND ETHNOLOGY.

Published by F. H. Revell, 150 Madison Street, Chicago, Ill.

SUBSCRIPTION, \$4.00 PER YEAR.

STEPHEN D. PEET, Editor-in-Chief.

Associate Editors: DR. D. G. BRINTON, PROFS. A. C. MERRIAM, J. AVERY, MESSRS. HENRY PHILLIPS, PH.D., A. S. GATSCHET and REV. J. O. DORSEY.

Correspondence solicited, especially from collectors of Archæological relics.

SEND FIFTY CENTS FOR SAMPLE COPY.

THE MUSEUM.

VOL. I.

PHILADELPHIA, JUNE, 1885.

No. 2.

FOR THE MUSEUM.

THE SYMBOL OF THE CROSS IN AMERICA.

BY DR. DANIEL G. BRINTON.

Philosophers tell us much about the uniformity of nature; how in the realm of inorganic existence like causes are at work producing like effects. So it also seems to be in the realm of mind. Go where we will over the world, seek as we please in the records of the past, we find man actuated by the same motives, cheered by the same hopes, betraying the same fears, and bodying forth his half-formed ideas under the same material symbols.

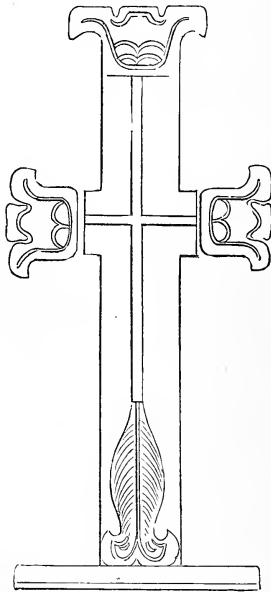
The time was when such similarities were supposed to indicate that nations widely remote must yet have borrowed at some distant date their knowledge one from the other. There are still some who favor this view, or who have been so impressed by these strange parallelisms of culture that they attribute them to an ancient revelation whose teachings had never been forgotten.

One of the most striking of these widespread symbols in early art is the cross. It is found in the culture of every race, and on the ancient monuments of every continent. More than this, it seems to have been closely bound up with the deepest mysteries of religion, and to represent in some way the strongest emotions of the human heart, and this in the most diverse mythologies and forms of worship. I need not speak here of its sacredness in the Old World, from the period when it was adopted as the symbol of fertility by the ancient Egyptians, down to the present day, when it is regarded as the most sacred of all figures by the majority of Christian worshippers. I shall only speak of it as a holy form among the aboriginal tribes of America.

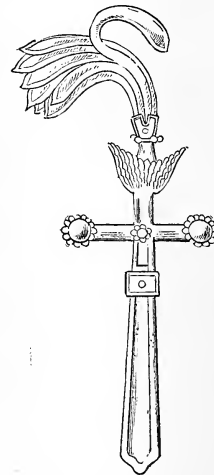
The cross is, in its elements, an extremely simple figure. These elements are merely one straight line crossing another. From it, however, an extraordinary variety of modifications have been evolved. In mediæval heraldry there were represented not less than 227 different crosses. The most familiar base forms are the Greek and the Latin crosses. In the former the four arms are equal in length, in the latter one is prolonged to form the upright which supports the others. Both of these forms were found among the religious symbols of the ancient Americans. One of the most perfect examples of the Latin cross is that inscribed on the famous tablet of Palenque, an

elaborately-carved altar piece which was discovered in a ruined temple of that ancient city. It is shown in the following cut, taken from a photograph.

On the original slab this cross is surrounded by grotesque and elaborate ornaments; on its summit is perched a bird, and the long arm rests on an ill-defined figure, supposed by some to be a skull, but which is more probably the head of a serpent. Nothing could be more in accord with Christian symbolism than such a representation of the cross bearing aloft the bird (the dove) and planted victoriously on the head of the serpent. But all these symbols had other meanings among the tribes who built Palenque. The cross, the serpent and the bird were all symbols of the winds and rains, of the productive powers of nature, and of the gods of the harvests.



CROSS OF PALENQUE.



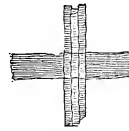
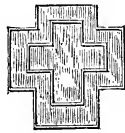
CROSS OF LORILLARD.

The Latin form of the cross seems to have been the favorite of their race, for among the ruins of an ancient city on the upper waters of the Usumacinta river, visited a few years ago by M. Charnay and Mr. Alfred Maudsley, and christened by the first-named traveller "Lorillard City," he found several representations of this cross sculptured on the stone lintels of the temples. I take the figure of one from his recently published work *Les Anciennes Villes du Nouveau Monde*. He calls it "The Cross of Lorillard," both cross and city being named from the generous American manufacturer who advanced the money requisite for the explorations.

Several of these crosses are held in the hands of the persons whose figures appear on the tablets; they are surmounted by the conventional figure of a bird, and no doubt have the same reference to the gods of the winds and rains which is discerned in that at Palenque.

The nation which built these cities were the Mayas, and they were also the constructors of that other wonderful series of edifices known as the city of Copan. There, too, a remarkable cross is found, sculptured on one of the massive stones fallen from a temple. It is, however, a Greek cross, the extremities of the arms curved and ornamented, and in the centre, at the point of junction of the four arms, is seated the ugly figure of a gigantic frog. The meaning of this is obvious when we learn from an ancient writer that in the symbolism of those nations the frog stood for the rains, and bodied forth the goddess of water. The Mayas, indeed, called the cross by a word which in their tongue means "the tree of rains."

Passing to Mexico, we find the cross to have been an almost universal religious symbol, and still with the meaning of the four winds and the rains which they bring. As such, the cloak worn by Quetzalcoatl, who in one of his aspects was the god of the winds, was ornamented with numerous crosses painted upon it or woven into it. Three of these Mexican crosses are represented in the following cuts:—



THREE CROSSES, AZTEC.

These also are from Charnay's very beautifully illustrated volume, and are from specimens of ancient work which he himself found.

Among the ruder tribes of the area of the United States many examples of the employment of this symbol could be given. The "rain-maker" of the Lenape, when he would invoke the gods of the air to send the fertilizing showers down upon the crops, would begin his exorcisms by first drawing on the ground the figure of a cross; the Creeks of Georgia, at their green corn festivals, held in honor of the deities of fertility, placed four logs together, end to end, forming a Greek cross; and the traveller on our western prairies will occasionally come across the same figure, made by placing large stones in rows, the relics of the rites of the "great medicine lodge," when the votaries have been summoning the divinities of the air and the guardians of the rains.

These are but a few of the examples of the distribution of this widely venerated symbol in America. Its presence excited the earnest attention of the early explorers, especially those of the Roman Catholic faith, and several volumes have been written to show that it is a proof of early missionary voyages to this continent; but we may rest assured that it had no such meaning in American religions as is associated with it in Latin Christianity, and that its presence is only an example of that parallelism of art development referred to at the outset of this article.

FOR THE MUSEUM.

BIOGRAPHICAL SKETCH OF PROF. EDWARD D. COPE.

BY PROF. THOMAS G. GENTRY.

Edward Drinker Cope, a distinguished American scientist and collector, was born in Philadelphia, July 28th, 1840. Descended from wealthy parents, belonging to the Society of Friends, no expense was spared in giving him as good an education as the best private schools and teachers of the day could afford. At an early period of life



PROF. EDWARD D. COPE.

(Portrait from the *Germantown Independent*.)

he entered the medical department of the University of Pennsylvania, but did not remain long enough to take his degree, as science, rather than medicine, was the rallying-point of his ambition. Nature-studies engrossed his principal attention, and, more than anything else, determined his subsequent career. With such wonderful powers of mind and body as he possessed, it is not at all surprising that his first important scientific paper—a description of the bony structure of the mouth of venomous

snakes—should have been given to the world at the age of nineteen years. His fondness therefor increasing with advancing years, others followed in succession, many of them of the highest importance to science, until our young author began to compel recognition, and to assume a position of prominence among the savants of the day. Society after society, at home and abroad, soon welcomed him, and to-day his name is enrolled in the list of membership of a dozen or more, notably the United States National Academy of Science, the Geological and Zoölogical Societies of London, and the Geological Society of France. Though mostly employed at present in scientific labor, voluntary and unremunerative, in a pecuniary sense, he, nevertheless, has had time to fill many important positions. As geologist and palæontologist of the U. S. Geological and Geographical Survey West of the One-hundredth Meridian, under Capt. G. M. Wheeler, and as palæontologist of the U. S. Geological Survey of the Territories, under Dr. F. V. Hayden, he has been of inestimable value to science and the country.

Respecting the Professor's scientific work, which has mainly been in the comparative anatomy of living and extinct vertebrate animals, and in the theory and philosophy of the doctrine of evolution, much might be said of a commendatory character, as his discoveries in anatomy have been usually turned to account in a taxonomic sense, so as to be utilized in the study of the laws of succession of extinct animals. His publications are numerous and varied, embracing, besides some three hundred papers, five ponderous quarto volumes, well-laden with descriptions and illustrations of the most astounding revelations of the great stone-book of nature; more than one thousand species of preëxistent vertebrates, representing families and orders previously unknown, are described for the first time in these mighty tomes.

The researches necessary for the production of labors so extensive, as such a mass of literature evidences, has called the author thereof into many and diverse regions, where the foot of civilized man has hardly dared to penetrate. Western Kansas, Southwestern Wyoming, Northeastern Colorado, Northwestern New Mexico, Western Texas and the Upper Missouri have been at various times the scenes of his explorations. In a country occupied by savage beasts, deadly reptiles and treacherous Indians, and exposed to a thousand dangers by hill and flood, he has gleaned the largest and, no doubt, the most diversified collection of vertebrate fossils in America, and enriched his mind with knowledge that has been a potent influence in the world of thought.

Were it possible to resurrect the multitudinous forms of back-boned life that once peopled our realm, and gather them together into one vast orderly army, the mind of man would be lost in utter bewilderment as the mighty array passed in review. Gigantic deinosaurs, monstrous sea-serpents, huge, unwieldy mastodons, five-toed horses, lions, camels, monkeys, and hosts of others, many of the most composite structure, would constitute a panorama of strange figures—denizens of far-off tertiary and cretaceous times—that would well-nigh o'erwhelm the beholder. For the little that is known of these strange creatures we are largely indebted to the subject of our sketch. I shall never forget the interest, the curiosity, the astonishment excited when, a few years ago, he introduced to the Philadelphia Academy, then holding its meetings

in their old building at Broad and Sansom Sts., the skull of his famous *Loxolophodon cornutus*. A more singular animal could hardly have been conceived, as it combined the characters of several. Its head was considerably elongated, and somewhat like that of a rhinoceros in contour. Two sets of horns, one median and the other posterior, projected upward from the skull, while in front there existed a short tapir-like trunk. Protruding from its upper jaw, a pair of curved teeth, frightful canines, twelve inches in length, added to its grimness. But the latter indicated no carnivorous propensity, as the character of the molars most plainly showed. They, it is presumed, merely served to dig up the roots of plants, or haul down the twigs of trees, upon which the monster fed, it being, beyond doubt, an herbivorous animal. In a ravine of the bad lands of Wyoming, the remains of the huge creature were found by the Professor himself, in the summer of 1872. I might enumerate and describe more interesting forms of life, that once ranged over the plains of ancient America, or wallowed in its marshes, but time and space forbid. Those manifesting any concern in the matter, will find all the information they desire in the Professor's published writings, or perhaps by paying a visit to his enormous collection in Philadelphia.

Asking, kind reader, your indulgence for this digression, I now come back to the subject of my story, to write you a few lines respecting the character and scientific standing of its hero. The general judgment of men who have had the best opportunities of taking his measure is that he is a man of uncommon candor and sincerity, open, manly, straightforward; a thoughtful person, with ample courage of his convictions, who could be depended on for fidelity to any cause which he should espouse. As a scientist, it is justly claimed that he occupies the foremost position, and deserves to rank with such men as Cuvier, Owen, Huxley and Leidy.

HOW TO ARRANGE A COLLECTION OF TEXTILES OR BANK NOTES.—The best method of preserving small pieces of textile fabrics, such as mound builders' cloth, is to place each specimen between two pieces of glass, of equal size. These should be held firmly together by pasting narrow strips of stout paper or plain silk around the edges. Paper money may be mounted in the same manner, but rectangular sheets of clear mica should be used, instead of glass. The notes may then be fastened or laid between the leaves of a blank book.

The following touching little episode is related by Audubon, the ornithologist: "I was sauntering along the streets (in Edinburg, Scotland), thinking of the great Creator, on the beauty and majesty of His works, and of the skill He had given man to study them, when the whole train of my thoughts was suddenly arrested by a ragged, sickly-looking beggar-boy. His face told of hunger and hardship, and I gave him a shilling and passed on. But turning again, the child was looking after me, and I beckoned to him to return. Taking him back to my lodgings, I gave him all the garments I had which were worn, added five shillings more in money, gave him my blessing, and sent him away rejoicing, and feeling myself as if God had smiled on me."

Natural History.

FOR THE MUSEUM.

CURIOUS FACTS ABOUT SNAILS.

BY EDWIN A. BARBER.

Those who are familiar with our common large garden snail (*Helix albolabris*, Say), which carries its house on its back, have doubtless noticed that the shell is coiled toward the right hand. The shells of most species of snails turn in the same direction, for which reason they are called *dextral* shells. Cooper's *Helix* of the Rocky Mountains has this characteristic, but is smaller and striped with brown. It occurs abundantly on the plateaus of Colorado, and in some localities specimens can be scooped up by the quart. One day the writer was hunting amongst the bushes along a ravine, for conchological specimens, when he picked up the one represented in the accompanying engraving. Some peculiarity of the



shell attracted his attention, but what was it? Could it be a new species? No! An examination showed that it was a specimen of *H. Cooperi*, but reversed, turning toward the left hand. It is a freak of nature, just as much so as a man whose heart is placed on the *right* side, and we are told that such cases have been known.

There are other species of snails, however, which always turn in this direction—that is toward the left, when they are called *sinistral*, as, for instance, the fresh water genus *Physa*. If we should find one of these turning the same way as our garden snail we should call it a reversed specimen, and such examples are rare and deserve to be preserved as curiosities.

Some snails, as *Helix Cooperi*, are *viviparous*, that is, they bring forth their young alive, each one with a tiny shell, perfectly formed. At a certain time of the year, if an adult female of this species be killed by scalding, and picked out of its shell with a pin, we shall find in it a dozen or more of these little shells. Other snails, such as the one first

mentioned, are *oviparous*—that is, they lay little globular eggs, from which, in time, little garden snails are hatched.

Some snails close the doors of their houses by little lids which fit nicely into the openings when the snails have retired. These plates are called opercula. In some snails this operculum is heavy and thick; in others it is thin and horny. In the garden snail it is absent, but when he draws himself into his shell he closes the opening with a thin, transparent membrane which excludes the air. Snails will live a long time without food, under certain conditions. I once had a common snail which I placed in a little box and locked in a drawer. As soon as he found himself a captive he sealed himself up in his house and went to sleep. *Two years afterwards* I thought of my snail again. On opening the box I found him just as I had left him, and on placing him in a moist place I soon had the satisfaction of seeing him come out, apparently as lively as ever. A case is recorded of a snail shell which had been glued to a card and placed in a case in a museum, where it remained *twelve years*. One day the curator noticed a film over the opening, and on placing the shell in water the occupant came out, presumably as hungry as a bear, after his long fast of twelve years. How much longer he might have lived shut up in his prison, had he not been disturbed, it is impossible to say.

Zoölogy.—Since our last issue the following animals have arrived at the Philadelphia Zoölogical Garden:—One otter, four prairie wolves, one Virginia deer, one Mazame deer, one raccoon, one alligator, one common crossbill, one California quail, two Gambel's partridges, two Cayenne rail, one great-horned owl, two yellow birds, and one red-tailed hawk.

The Zoölogical Society's Gardens, of London, England, received recently two Macaque monkeys, from India, a Campbell's monkey from West Africa, a European boar, an emu, from Australia, and a large number of smaller birds, some of them of great rarity.

Ornithology and Oölogy.—AN INTERESTING CASE OF PARASITISM.—Our well-known cuckoos, the black-billed and the yellow-billed, have some

very curious ways during the season of breeding. The females hardly ever lay their complement of eggs at first, but commence sitting after a few have been deposited, and just as these are ready to hatch, others are extruded, and thus the early young are partially relied upon for assistance in the duty of incubation. Nests are often found with young birds of moderate size alongside of eggs in various stages of development.

Interesting as these facts are, they are less so than the case of parasitism which I shall now relate. The party concerned was the black-billed cuckoo, and the crime was that of laying in the nest of her nearest cousin, whose home is often in close proximity to her own. This occurrence took place in the summer of 1883, and the credit of having made the discovery is due H. K. Jameson, of Manayunk, Pa. Being an amateur collector of little experience, he was not aware of the importance of his discovery, but merely supposed that he had met with a nest of *Coccyzus Americanus* with a full setting of eggs. The number in the nest was five, three being larger and more elliptical than the others, and of a light greenish-blue, rather than of a bluish-green, color. On seeing the eggs, the writer had no hesitancy in pronouncing the smaller as those of *C. erythrophthalmus*, and the larger as those of *Americanus*. There can be no doubt as to the ownership of the nest, for the male and female of the latter species were in undisputed possession. Both nest and eggs are now in my collection.—THOMAS G. GENTRY.

An instance of compulsory (?) parasitism occurred a few years ago near the town of Parkesburgh, Pa. A nest of the meadow lark was found, containing five eggs, three of which were of ordinary size, and nearly ready to hatch. The remaining two were of larger size, much brighter in color, perfectly fresh, and had evidently been deposited by a different individual. It is supposed that the recently laid eggs had been deposited by a bird whose nest had been destroyed by the reapers before she had finished laying. Nothing remained for her to do, in this emergency, but to entrust her remaining eggs to the care of a neighbor.—E. A. BARBER.

James Turnbull, of Pastorie, Grey Town, Natal, records, in *Nature*, the discovery of a new bird belonging to the goat-suckers. It is closely related to the

long shafted goat-sucker of Africa, the length of body being six inches, of a brown color.

Botany.—A score or more of mosses, not named in Dr. Wm. Darlington's *Flora Cestrica*, have recently been found in Chester county, Pa. Of these may be mentioned *Climacium Americanum*, Brid., *Bryum* (*Webera*) *Lescurianum*, Sull., and *Leskea polycarpa*, Ehrh.

The Journal of Mycology, for May, contains an alphabetical list of 122 host-plants of the parasitic *Cercospora* of N. A., by J. B. Ellis and Benjamin M. Everhart.

Prof. J. T. Rothrock, in one of the Michaux lectures, delivered in Horticultural Hall, Philadelphia, recently, stated that two species of algae had been discovered, living habitually on silver or other coin. Paper money is also known to harbor at least four kinds of simple fungi.

Mineralogy.

The class in Mineralogy, at the Philadelphia Academy of Natural Sciences, was taken by Prof. H. C. Lewis, recently, to a celebrated quarry near Attleborough, Pa., where occurs a remarkable outcrop of crystalline limestone. Among the species collected were the following: Sphene in wedge-shaped crystals—some of them an inch in length, pyroxene, crystals of brown mica or phlogopite, scapolite, wollastonite, graphite, white calcite, gray feldspar, pyrite, chalcophyrite, several varieties of quartz and jasper. Lancaster, Chester, Delaware, and some portions of Bucks, counties are particularly rich in minerals.

The March number of the *Hoosier Mineralogist and Archaeologist* contains an interesting article on "Limestone or Calcite as a Mineral, and Characteristics Thereof."

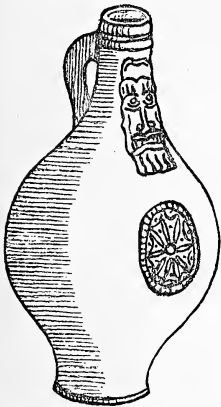
Theo. A. Kendall, in the *Young Mineralogist and Antiquarian*, reports the receipt of some fine, showy crystals of vanadinite and descloizite, from the Western mining country.

The report reaches us that an emerald, weighing a pound, and therefore the largest known, has recently been found in one of the mines of Colombia.

Archæology.

FOR THE MUSEUM.

An interesting relic was found some time ago in an Indian grave in Lancaster County, Pa. It is an ancient jug, probably two hundred years old, which was brought to this country by one of the early settlers. It is what is commonly known as a "gray-beard" or "Bellarmine" jug, of gray stone ware. Such vessels were used to a great extent in England during the seventeenth century, and were common in taverns where ale and beer were served.



Mr. Llewellynn Jewitt, in *The Ceramic Art of Great Britain*, writes:—"These jugs were derisively named after Cardinal Bellarmine, who died in 1621. The Cardinal having, by his determined and bigoted opposition to the reformed religion, made himself obnoxious in the Low Counties, became naturally an object of derision and contempt with the Protestants, who, among

other modes of showing their detestation of the man, seized on the potter's art to exhibit his short stature, his hard features and his rotund figure, to become the jest of the ale-house and the byword of the people." The specimen alluded to, which is here figured, measures eight inches in height. A similar one is represented on the lower right hand corner of the cover of this magazine.

AN ANCIENT TABLET.

At the regular meeting of the Numismatic and Antiquarian Society of Philadelphia, on the evening of May 7th last, an interesting relic was exhibited, from Nineveh. It was a slab of mottled alabaster, nine feet in length, and three and a half in width, on which was inscribed the winged figure of a man with double-horned helmet, facing the right, holding in one hand a fir-cone, and in the other a basket. An inscription in cuneiform characters was engraved on the lower third of the tablet.

About forty years ago, a young missionary, Rev. W. F. Williams, visited the site of the ancient city, where he procured for a friend in Philadelphia this fine specimen of Assyrian sculpture. The caravan which started with the stone (or stones, as it had been sawed into three portions to facilitate transportation) for Alexandretta, was attacked by a band of robbers, and the tablet was left on the desert. Some years later it was recovered, and finally (twenty-five years ago) reached Philadelphia, and was deposited in the cellar of a warehouse and forgotten, until brought to light a few days ago.

It is not probable that the winged figure engraved on it is intended to represent the king, but rather an attendant or god. So far as can be ascertained by a comparative translation of the inscription, the slab is supposed to have been erected in the temple from which it was taken, in the ninth century B. C., and is, therefore, nearly 3000 years of age. There are probably not more than half a dozen Assyrian sculptures of this character in the United States.

An old German tumulus, which has just been opened near Rosenheim, was found to contain a human skull, some broken earthen vessels, and a piece of charred wood, presumably the sole relics of a funeral pyre. The geological surroundings show that the tumulus must have been built previously to the eighth century before Christ. The skull is, therefore, the oldest human remnant known to exist in Germany.—*The Collector* (Hull, Eng.)

In the archæological collection of Philip Sharples, of West Chester, Pa., is a delicately chipped and barbed arrow point of volcanic glass (obsidian) found in Chester county, Pa. The form of the specimen is western, the material having been obtained either in Mexico or Montana.

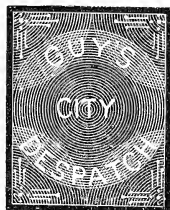
We have just received from a correspondent in Southern Utah a large collection of prehistoric Pueblo pottery, from the ruined cliff-houses. The ware is of the most superior quality—white, lustred, with designs in black, brilliant red ware with black ornamentation, corrugated ware, handles of jugs, and small fragments, ground round, with holes for suspension.

Philately.

For THE MUSEUM.

GUY'S DESPATCH.

Although collectors generally do not recognize dispatch stamps which were issued after the year 1862, they may be classed amongst philatelic curiosities, and a history of them may be of interest to many. *Guy's City Despatch* was established in Philadelphia early in the year 1879. The office for the transaction of business was in an upper room of No. 1123 Chestnut street.



But one stamp was issued, of a dark pink or red color, bearing in white the words "Guy's City Despatch." The canceling mark (rubber stamp) was a large ellipse in dark red, with the words "Guy's City Despatch, 1123 Chestnut street." The career of Mr. Guy was brief, if not brilliant. Many of the prominent business houses of the city patronized the company for several weeks, the postage being only one cent for sealed letters, about twenty carriers being employed. The office was closed by Government officials on June 16th, 1879.

An *International Society of Philatelists* has been established in Dresden, with a number of branch societies or chapters in other parts of Europe. The official organ of the society is *Der Philatelist*, an illustrated journal of high character. Persons over eighteen years of age who are interested in the study or collection of postage stamps may become members on application, the annual fee being \$1.00. Correspondence in English should be addressed to the second secretary, Herr G. Lange, Wilsdruffer Strasse, Löwenapotheke, Dresden.

The Brattleboro', Vermont, stamps are among the best known of the Government Locals, and bring a high price, though not so rare as some of the others. They were catalogued as far back as 1863. The Brattleboro' was issued in 1841 by Dr. F. N. Palmer, then postmaster. They were engraved by Thomas Chubbuck, ten stamps in a sheet. They

are oblong, about 20 x 15 millimetres in size. In the centre, in an octagon frame, are the initials of the postmaster, "F. N. P." At the top "Brattleboro' Vt.," "5 cents" at the bottom; "P. O." at the sides. They were printed in black on brown paper. About a dozen unused specimens are known, but only two or three cancelled ones have thus far been discovered. One, on the original letter, passed through our hands about a year ago, and is now the property of a Philadelphia collector. Another was found in New York by a rag picker, a few months since, and was sold by him to a dealer in that city for a comparatively small sum.—*Philatelic Monthly*.

It is a universal commercial practice, not only among Hindús, but among Parsís and all native merchants (in India), to superscribe the envelopes of their letters with the symbols $\circ \circ$. 74½. The origin and meaning of this is thus related:—In 1568 A. D. the spoil from the golden ornaments of the women taken at the sack of Chitor was estimated to weigh 74½ *mans* (about three tons) of gold. The valour of the defence of Chitor by Jaymal and the horrors of the sack became so deeply impressed in the popular mind that ever since the number 74½ has been held accursed. In the superscription the three circles $\circ \circ$ stand for the fortress of Chitor, and the meaning of it is said to be "May the sin of the slaughter at Chitor lie on him who violates the secrecy of this letter."—(KAKKU MALL) *Panjab Notes and Queries*.

London, England, may well be called the city of post offices, as it has 765 branch and district offices and receiving houses.

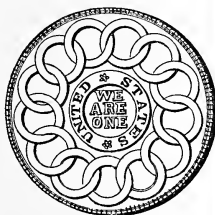
Chambers's Journal (London), for April 1, 1885, contains a very interesting account of the manufacture of postage stamps in England.

We learn that the collection of the late Mr. Henry Wagman, of Saratoga Springs, N. Y., is offered for sale. It consists of Revolutionary and Rebellion war relics, minerals, curiosities, old books, etc. Among the coins is a Pine Tree Shilling (1652); the group of stone implements includes a pestle two feet long, with carving of animal's head, two animal-shaped amulets, tobacco pipes, whistles, a copper axe and spear heads, from N. Y. State.

Numismatics.

THE FRANKLIN CENT.

In the year 1787 the first United States cent was coined, which is now known as the "Franklin," "Ring," or "Fugio" cent. A number of dies were made and used in coining this piece; exactly how many it is difficult to say. Mr. Horatio N. Rust, now of South Pasadena, Cal., had several of these in his possession at one time, and furnishes the following information regarding them: "I had heard that the coinage was done in New Haven, Conn., and I determined to try to find the dies. After a long day's fruitless search I found myself at East Haven, where I continued my inquiry of a collector. He replied that he had never heard of the dies, but that the remnants of the estate of Brown & Platt had belonged to a hardware house on Chapel street. I hastened there, and as I opened the door I saw the die on a desk, used as a paper-weight. I soon found that they had two and a half pairs of them,



and they told me that they once had three pairs, but had loaned one, which had not been returned. I later saw an odd die in the hands of an employé of the Wilson Sewing Machine Company, at Bridgeport, possibly the one lost.

"I learned from Ex-Governor Hall, of Vermont, that part of that coinage was done by Brown & Platt at Brandon, Vt., probably by contract. I have also been told that B. & P. were bankrupt, and, under the law, could not be arrested while on their own premises; so they conducted the coinage at home."

A pair of the dies mentioned above passed into the hands of Mr. J. Colvin Randall, of Philadelphia, and are now in the possession of Mr. W. Elliot Woodward, of Boston, Mass.

A collector in Philadelphia owns a Franklin cent struck in silver. This piece is a very rare type, but three or four being known to exist.

The American Journal of Numismatics, for April, contains an interesting paper, by Alexander Del Mar, on the "History of Money in China," accompanied by a lithographic plate, representing six coins, ranging from B. C. 2257, to A. D. 9. The specimens figured are of the bell, knife or scimeter, and the key shape, all curious and interesting forms. A large collection of similar pieces, to some of which the date 2852 B. C. is ascribed, are now on exhibition in the Pennsylvania Museum, in Philadelphia; they are known as "cloth," "knife," "horse" and "key" coins.

Collectors and Collections.

The Hon. W. W. Randall recently returned from the United States of Colombia with the largest collection of antiquities ever formed in that country, for which he paid the owner, Señor Ramos Ruiz, the sum of \$25,000. The collection contains 1000 specimens of pottery, 1000 objects of gold, and many of wood, stone and copper. It includes hundreds of curiously carved images, implements and ornaments; elaborately moulded earthenware vessels, calendar stones, and many unique objects. This collection is now in New York.

Mr. J. Colvin Randall, of Philadelphia, owns the largest and most complete collection of United States gold coins in the world. Of some dates, notably the 1795 half eagle, he has as many as half a dozen varieties, which collectors generally do not know exist.

Probably the largest private collection of Egyptian antiquities in America is owned by Mr. James Douglas, Jr., of Phoenixville, Pa. It consists of antique pottery, figurines, bronze ornaments and implements, inscribed stones, mosaics, mummified animals, and a fine mummy case.

In mentioning the various philatelic collections belonging to Mr. Wm. A. Jefferis, in our last number, one of the most important was inadvertently omitted. This is a collection of postal cards of the world, numbering 1100, all of them unused. It is, probably, the most complete and valuable one in the U. S.

Dr. Jesse C. Green, of West Chester, Pa., is the owner of a very complete collection of Continental and Colonial notes, which includes representatives of all of the original thirteen States.

John R. Baker, Esq., of Philadelphia, Pa., has a large series of ancient vases from Peru, mound vessels of animal form, and some fine Cypriote vases with the characteristic vertical ornamentation.

A collection of over 4000 postage stamps is in the possession of Mr. George H. Watson, of New York. Amongst many rare specimens are some desirable Confederate locals, and two of the used Mulready envelopes with the original addresses and postmarks.

John R. McIlvain, of Philadelphia, whose death occurred in April last, at the age of seventy-two, was a well-known ornithologist and collector of Indian relics. His collection of modern Indian costumes, photographs and accoutrements was probably the most complete private collection of the kind in this country. He had a room entirely devoted to his various collections. Around the walls were large standing cases, entirely filled with beautifully prepared birds. Amongst other curiosities, he had a number of nests and sets of eggs of the humming bird, which he had made himself, and which could not be distinguished in appearance from the genuine.

The Normal School Museum of West Chester, Pa., contains the original and very complete herbaria of native and foreign plants, formerly owned by Dr. Wm. Darlington and David Townsend, eminent botanists of the last generation.

The Museum of the Kansas State Historical Society, of Topeka, contains valuable collections of autographs, coins, antiquities and modern Indian costumes.

A valuable series of relics from the Swiss Lakes, formed by the late Dr. Ferdinand Keller, of Zurich, is owned by Dr. F. W. Lewis, of Philadelphia. In it are objects of stone, horn, bone, pottery, bronze, textile fabrics and specimens of charred fruits and cereals. The most interesting objects in the collection are the bronze bracelets, hair pins and razors, and a number of highly polished stone celts set in deer's horn handles.

There are about 50 collectors of gold coins in the United States, at present, and the number is steadily increasing. A few years ago there were scarcely half a dozen.

The Museum of the Peabody Academy of Science, at Salem, Mass., contains the finest collection of Japanese and Korean manufactures, bric-a-brac, curiosities and antiquities in America. It was made by Prof. E. S. Morse, the Director, during a recent visit to Japan. The collection of objects from the South Sea Islands, received from the East India Marine Society, is also one of the best in the United States. The series of natural history objects is particularly rich in corals, reptiles, birds and Australian marsupials.

Mr. James E. Mauran, of Newport, R. I., has the largest collection of heraldic book-plates in this country, comprising upwards of 3000 specimens.

The University of Tokio, Japan, is desirous of procuring for its Museum archaeological specimens from America, which may be sent, for transmission, to Prof. Edward S. Morse, Salem, Mass. The University already possesses a creditable collection from this country, in addition to the large and valuable collections of Japanese antiquities from the shell mounds of Omori, and other places.

RARITIES IN VARIOUS COLLECTIONS.

A large, antique, Norwegian cabinet, probably 250 years old, in the Bloomfield Moore collection, Philadelphia, is quaintly and elaborately carved and highly colored, and possesses a curious contrivance for concealing the lock, in the rail of one of the doors. This is one of the most interesting specimens of antique carving to be found in any public museum in the United States.

There are probably only three or four silver United States dollars of 1804, known in collections, *which were coined in that year* from the original die. The majority of those offered for sale, and sometimes bringing as much as 750 or 1000 dollars, are restrikes, which can scarcely be distinguished from the genuine.

In the library of the American Philosophical Society, at Philadelphia, are half a dozen genuine Mexican manuscripts of the fifteenth century—tribute rolls of cities and states under Montezuma. They are beautifully drawn and colored, on maguey paper, a substance resembling the cotton-fibre paper of Japan, of which fans are usually made. They were brought from Mexico by Mr. Wm. H. Keating, about the year 1823. Old Mexican picture-writings are rare and very valuable, and we would be glad to hear of any other examples which may be in libraries or collections in the United States.

Mr. A. E. Douglass, of New York, possesses a curious terra-cotta mask, from Quiche, Guatemala, Central America—an unusually fine and perfect specimen.

Mr. C. F. Gunther, of Chicago, Ill., has recently come into possession of an old volume which he is satisfied is the identical copy of the folio edition of Shakespeare, possessed at one time by the Rev. John Ward, vicar of Stratford-on-Avon, in 1661, and a great admirer of the famous dramatist. The top board of the binding, and the portrait, unfortunately, are missing. Across the top of the second page, however, is pasted a strip of paper, on what is supposed to be a *genuine signature of the great poet*,—one of the very few in existence. Below the autograph is written—

Printed
1623.

The works of William Shakespeare,
born in April, 1564, and died in
April, 1616.

[Signed] INO. WARD.

Mr. Gunther purchased the book from a gentleman into whose hands it had fallen, after having circulated through the West for many years, its true nature not being suspected. We shall await with interest the announcement of the result of the discussion which will undoubtedly take place in England over the authenticity of the book and the signature.

RECENT SALES.

One of our foreign correspondents, Monsieur Charles Cournault, writes from Paris in relation to the general stagnation of business in that city, espe-

cially in art. One prominent dealer complains not only that people do not buy, but that they do not come into the shop to price his goods, or even stop to look in at the window. One important sale, however, has taken place recently—that of the collection of statuary, terra cottas, bronzes, pictures, engravings, and bric-a-brac, belonging to M. d'Epinay. This magnificent collection was sold, by auction, on April 20th and 21st. It was valued at 400,000 francs, but only brought 178,700. The following quotations are made: MARBLES.—The Three Hours, from life, 20,000 frs.; David Casting the Sling, 2650; Callixene, 5400. ANTIQUE SCULPTURES.—Centaur Embracing a Bacchante, 4960; Faun, 1680; two chandeliers, in marble, 680; allegorical group, in honor of Louis XIV, terra cotta, 1000; Venus and Cupid, group in marble, by Falconet, 7000. FAIENCE.—Two statuettes of kneeling angels, by Lucca della Robbia, 155; terra cotta Tanagre figurine, 205.

Mr. W. Elliot Woodward's 75th sale was held in New York, by Messrs. Bangs & Co., on May 1st and 2d, last. We make the following quotations: An amulet or bird-shaped stone, from Ohio, sold for \$9.75; a discoidal stone, of compact sandstone, from Georgia, \$17; a stone pestle, nearly 22 inches long, from Massachusetts, \$9; a string of 42 copper beads, from Waterbury, Ct., modern, \$9; three fine grooved axes, from Ohio and Pennsylvania, \$8.50 each; a mound vessel in form of a human female figure—very fine and rare—costing originally \$35, sold for the low sum of \$14; another, with human head, \$10; one with head of a fox, \$12; an urn made by the Eastern Indians (only 11 or 12 similar specimens approaching completeness are known), from the collection of Prof. Ralston, was sacrificed at \$10; a U.S. local stamp, Am. Letter Head Co. (rare), went for \$1.25; a Squier & Co., City Letter Dispatch, 75 cts.

Mr. Woodward informs us by letter that he has recently purchased the entire numismatic collection of Mr. J. Colvin Randall, of Philadelphia, comprising the largest collection of U. S. silver and gold in existence; also his enormous stock of American and foreign coins and medals. Mr. Randall has for many years been the most prominent wholesale dealer in coins in this country, and has been an indefatigable collector for thirty years. The catalogue of this magnificent collection, which is being prepared,

will be a surprise to collectors. The sale will take place in New York, on June 29th and following days. Collectors may obtain catalogues by addressing Mr. W. Elliot Woodward, Roxbury, Mass.

FABULOUS PRICES FOR OLD BOOKS.

One of the rarest books to be found in collections is the Mazarin Bible, sometimes called the Mentz Latin Bible, printed about the year 1455. Two copies have been sold in past years for \$2500, but at the Syston Park Library sale, in December last, Messrs. Sotheby, Wilkinson and Hodge, in London, disposed of a copy of this rare edition for £3900, or about \$19,000.

At a recent sale in the same city, a copy of the "Psalmarum Codex," printed in 1459, brought £4950, or more than \$24,000.

EXCHANGES AND REVIEWS.

Prehistoric Fishing in Europe and North America, noticed in our last issue, is one of Dr. Charles Rau's best works, and is characterized by his usual painstaking care and accuracy, evincing, as it does, an immense amount of study and research. It is divided into two parts: First, EUROPE, which is subdivided into the *Paleolithic*, the *Neolithic* and the *Bronze* Ages. The object of the work is to collect together all known data pertaining in any way to the manner of fishing by prehistoric man. All classes of implements, carvings, mouldings, pictographs, weavings and other objects which in any manner bear upon the subject are described, and in most cases, figured, such as fish-hooks, harpoon-heads, reindeer-horns and bones with etchings of fish, fishing nets, stone sinkers, stone anchors, boats, etc., from the ancient caverns of France, the pile dwellings of the Swiss Lakes and from all other early remains in Europe.



FIG. 1.

The second part is devoted to America. Stone fish-hooks are described from Greenland, shell-hooks from the California coast, fish-hooks of cactus spine from Arizona, nearly all the forms of fishing implements and parapher-

alia which occur in Europe being represented. We find in North America representations of fish in the pipe sculptures of the mounds, fish knives or cutters from the Eastern States, and carvings of fish in shell and stone. In Mexico the picture writings contain fishing scenes.



FIG. 3.

showing fish figures in relief. It is of black ware, with a handle moulded in the shape of a monkey. Figs. 2, 3 and 4 represent three thin silver dress ornaments of fish form, found on one of the Chincha Islands of Peru, thirty-two feet below the surface. The original specimens are now in the American Museum of Natural History, New York. The author acknowledges his indebtedness to Messrs. Harper and Brothers, of

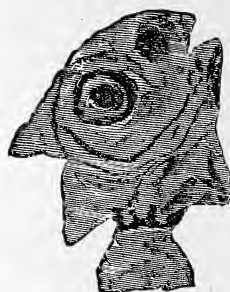


FIG. 2.

An appendix contains notices of fishing implements and fish representations discovered south of Mexico, such as stone carvings from Costa Rica, golden ornaments from Chiriqui, ceramic and textile representations from Peru. Through the courtesy of Prof. S. F. Baird, of the Smithsonian Institution we are enabled to reproduce some of the illustrations which appear in this work. Fig. 1 is a reduced engraving of a Peruvian vessel in the National Museum,



FIG. 4.

New York city, for the electrotypes of these interesting objects.

The cost of printing this work has been so great that only 250 copies have, thus far, been issued, a few of which will be sold for \$6.00 each.

Our Birds in Their Haunts, from the pen of Rev. J. Hibbert Langille, of Buffalo, is the latest novelty in bird literature. This is a charming volume of more than six hundred pages, and written in such easy, fluent language, as not to be beyond the comprehension of the veriest tyro in matters ornithological. It is a book for everybody. Rich in the details of migration, instinct, analogy of nidification, and specialized forms and adaptations of structure in birds, it cannot but commend itself to the working naturalist, and must sooner or later be upon his shelf. To the gospel ministry it also especially addresses itself, and claims recognition, as it is one of the few scientific books of the present age that notes evidences of a Designing Intelligence in the works of Creation. As a valuable contribution to the science of birds we hail it, and wish for it a world wide popularity.

The Pennsylvania Magazine of History and Biography, always a welcome visitor, is issued four times a year by the *Historical Society of Pennsylvania*, at 1300 Locust St., Phila. The first number of Vol. IX (April, 1885), just received, contains a sketch of Sir John St. Clair, Bt. (with steel portrait), by Charles R. Hildeburn, and a valuable paper on *American Languages, and Why we Should Study Them*, by Dr. Daniel G. Brinton. The department of *Notes and Queries* is full of interest.

The Second Volume of the *Magazine of Western History* opens with the May number. Besides a large amount of interesting matter, it contains an instructive article by C. C. Royce, entitled *An Inquiry into the Identity and History of the Shawnee Indians*, and another on *Indian Geographical Names*, by Russell Errett. Col. Charles Whittlesey, the veteran archaeologist, also contributes an important paper (illustrated by a number of portraits) on the *Personnel of the First Geological Survey of Ohio*. Published at 145 St. Clair St., Cleveland, Ohio.

The Agassiz Association.

PHILADELPHIA, PA.,

May 7th, 1885.

To the Editor of THE MUSEUM:

DEAR SIR:—A few days ago I observed, in a small stagnant pond near the city, some small, lively objects in the water, near the bank, a number of which I collected in a bottle, for examination. They resembled, to the naked eye, minute clams with double shells, and swam or jumped rapidly through the water in a vertical position. On submitting them to an experienced naturalist, I find that they are crustaceans—a species of *Cypris*, of the subclass Entomostraca. Although I had passed the pond many times before, I had never noticed these interesting little creatures, which this season are present in great numbers. I should like to know whether any other members of the A. A. have ever observed them, and, if so, what they know about them.

W. S. B.

MR. EDITOR:—Will you allow me a small space to describe some observations I made during last summer? I spent two weeks in observing the habits of the “plant-louse” or aphids, which I had read about, but never noticed. On the flower stalk of a Yucca plant or “Spanish bayonet,” in our front yard, were myriads of these little black (not green) “ant cows,” seemingly feeding on the juicy stem of the plant. Quantities of the common black ants came up the stalk, and approaching the aphides seemed to stroke them with their feelers, when the little bugs gave forth a little drop of transparent liquid, which the ants drank eagerly. This performance was repeated many times in an hour, the ants seeming to enjoy it very much and the little “cows” not to object in the least.

We like the first number of the *Museum* very much and have no doubt that it will become very popular with the Association.

H. S.

Alan F. Gentry, Esq., the young Assistant Curator of the Philadelphia Academy of Natural Sciences, describes, in the last signature of the Proceedings of that institution, a new species of jay, which he calls *Cyanocorax Heilprini*, in honor of Prof. Angelo Heilprin.

CHAPTERS DISSOLVED.

- 144, Mount Vernon, N. Y. (A.)
 164, Jackson, Mich. (B.)
 352, Amherst, Mass. (A.)
 367, Boston, Mass. (C.)
 452, Burlington, Vt. (A.)
 665, South Framingham, Mass. (A.)
 710, San Bernardino, Cal.

THE AMATEUR MUSEUM.

Frank W. Wentworth, of Chicago, has a collection of birds' eggs numbering about 400 specimens, and including 150 species.

Benjamin W. Haines, of West Chester, Pa., has formed a collection of birds' eggs, in which 100 different species are represented, including the Eider duck, American pelican, sandhill crane, whooping crane, red-tailed hawk, hooded merganser, brown pelican, etc.

ANSWERS TO CORRESPONDENTS.

J. S. LINCOLN.—The half dollar of 1834 (either small or large date) is worth only face value.

F. S.—We know of no instance of a humming bird laying more than two eggs.

COLLECTOR.—Your stamp, which has been returned to you, is a Russian envelope stamp, of 1868 issue.

J. H. L.—Pipes of the platform type are rare and valuable. An opportunity to secure one of undoubted genuineness, should never be lost.

F. G. P.—The cent of 1797, in fair condition, is not worth over 25 cents, while one of 1799 will bring \$5.00.

J. J. P.—Write to Prof. W. G. Farlow, Cambridge, Mass., enclosing stamp for reply. He is an authority on seaweed.

F. M. DAVIS.—So far as we know, Maj. J. W. Powell, now Director of the U. S. Bureau of Ethnology, was the first and only explorer to pass through the grand cañon of the Colorado, a description of which was published in one of his reports. Later, in 1875, a branch of Hayden's Survey explored a portion of the great cañon of the Rio San Juan, to within about 25 miles of its junction with the former.

Editorial.

If good wishes were riches, we would already possess the reputed wealth of Croesus. Lack of space prevents us from publishing a tithe of the complimentary things which have been said of our first number. We hope to merit the continued good will of our subscribers by a steady improvement, and trust that ere long we shall feel justified in increasing the size of *The Museum*. To one and all of our well wishers, and to those who have given us a more substantial support, we can only say "Thank you!"

Persons who do not possess the taste for gathering together and studying the curious in nature and the beautiful in art, are deprived of one of the greatest pleasures vouchsafed to mortals. What enjoyment can be compared to that which accompanies the discovery of some new or rare gem in Nature's varied storehouse? How much happier is the boy who devotes the leisure of his evenings to the arrangement of his little collection, than he who spends his time in profitless amusement!

The Museum will, at all times, discountenance the printing and sale of *fac-simile* postage stamps, which are nothing less than counterfeits, and are of no value whatever to any one. It may not be generally known that the imitation of postage stamps, whether domestic or foreign, is a violation of Section 5465 of the Revised Statutes, which reads: "*Any person who shall forge or counterfeit, or knowingly utter or use any forged or counterfeited postage stamp of any foreign government, shall be punished by imprisonment, at hard labor, of not less than two nor more than ten years.*"

No reputable stamp dealer will offer *fac-similes* for sale.

We shall always be glad to hear from boys and girls regarding their collections, and to receive descriptions of specimens which they consider rare or interesting.

Some of the Departments have been unavoidably crowded out of this number but will be given space in the next.

RICHMOND DIATOMS!!

Twelve superb slides, the result of over ten years' collection and study, giving a completely unique showing of this celebrated deposit, with a rich specimen of the natural earth, postpaid, \$4.00; single specimens, 50 cents; descriptive circulars and catalogue, 4 cents.

C. L. PETICOLAS,
635 Eighth St., North, RICHMOND, VA.

COINS AND MEDALS.

ANCIENT, BYZANTINE, MEDIAEVAL AND MODERN.

An authentic attribution and full description accompanies every coin which I offer at and above 10 cents.

Direct importations from the leading coin marts of Europe.

The most complete and best assorted stock in America.

Invoices of Coins submitted on approval to parties furnishing satisfactory references.

Catalogues of Numismatic works on sale, 15 cents, postpaid.

Coin price list and circulars, upon receipt of postage.

LYMAN H. LOW,
NUMISMATIST,
Season of 1885. 838 Broadway, New York.

THE HERMES
International Advertiser
OF PHILATELY AND NUMISMATICS.
M. ISENSTEIN & CO.,
63 East Fourth Street,
NEW YORK CITY, U. S. A.

The Hermes is sent free of charge to all interests of the stamp and coin trade.

LAST ISSUE 9000 COPIES.

We charge for one year 12 cents—the net postage we have to pay.

ADVERTISING RATES:

(Nonpareil type measure, 12 lines to one inch, or the same amount of space)

8 CENTS PER LINE.

½ Page, \$13.00. 1 Page, \$24.00.

Strictly Net Cash in Advance.

Money orders, etc., must be made payable at Station D, New York City, P. O., to the order of M. Isenstein & Co., 63 East 4th St., New York City.

We BUY COINS of every description. Send them on approval to

M. ISENSTEIN & CO.,
63 East Fourth Street, NEW YORK CITY.

WANTED!

Autographs, Rare Manuscripts, Curiosities in Literature, Curiosities, Relics of Historical Interest; will pay cash; also curious books or rare bindings.

Address

C. F. GUNTHER,
78 Madison Street, CHICAGO, ILL.

AGENTS WANTED

In every City, Town, School and College in the World, to sell our approval sheets.

TORONTO PHILATELIC COMPANY,
18 Orde Street, Toronto, Canada.

Publishers of the Toronto Philatelic Journal.

Subscription, 25 Cents a Year.

ADVERTISING RATES:

ONE INSERTION.			THREE INSERTIONS.		
1 inch,	-	\$ 50	1 inch,	-	\$1.25
2 "	-	80	2 "	-	2.00
½ column,	-	1.50	½ column,	-	4.00
1 "	-	2.75	1 "	-	6.50
1 page,	-	7.00	1 page,	-	18.00

IN ADVANCE.

Remit money by P. O. Order, or small amounts in one or two cent stamps.

The Young Mineralogist and Antiquarian

Is just what every one interested in Geology or Archaeology needs. In the April number, a valuable table for the determination of minerals is given. Prof. Alexander Winchell is the author of this, and will also contribute one for the determination of rocks. There are a number of other well-known contributors to the Geological Department. Among the contributors to the Archaeological Department are Profs. Cyrus Thomas and Daniel G. Brinton, Messrs. S. H. Binkley, Isaac Smucker, Rev. W. M. Beauchamp and others. The Y. M. & A. is the official organ of the American Archaeological Association, and publishes the Reports of this Association.

It is not a new paper, but has been established about a year. Volume II begins with the July number.

Price 75 Cents per Annum.

A 50 cent specimen of mineral is given to each new subscriber. Specimen copy 8 cents.

Address, T. H. WISE, Publisher,
WHEATON, ILL.

A FEW TESTIMONIALS.

"I am highly pleased with the constant improvement and general excellence of your magazine."—S. W. STILLWELL, Deadwood, D. T.

"I have looked it over carefully, and am extremely well pleased with it."—PROF. S. C. SCHMUCKER, Reading, Pa.

"Our chapter of the A. A. (Agassiz Association) take the Y. M. and A., and think it an excellent paper."—R. J. WOOD, Jackson, Mich.

"I am greatly pleased with the creditable appearance of your journal."—ERNEST INGERSOLL (Author of *Country Cousins*), New Haven, Conn.

"I like your magazine very much."—J. H. STEARNS, M.D., Battle Creek, Mich.

FOR SALE.

A copy of the Naturalists' Directory (Cassino), 1878..... 75 cts.

A copy of the Naturalists' Directory (Cassino), 1879..... 75 cts.

A copy of the International Scientists' Directory, 1883..... \$1.00

A copy of the Naturalists' Directory, 1884..... \$1.00

The Taxidermists' Manual, by S. H. SYLVESTER. 30 pages..... 50 cts

The Taxidermists' Manual, by CAPT. THOS. BROWN, F.L.S. 150 pages, 6 plates..... 75 cts.

The same, *new* (20th edition)..... \$1.00

Half Hours with the Microscope, by TUFFEN WEST. 8 plates, 84 pages, London..... 75 cts.

The Microscopist, A Complete Manual on the Use of the Microscope, by JOS. H. WYTHES, M.D. 200 pages..... 60 cts.

Elementary Text-Book of the Microscope, by J. W. GRIFFITH, M.D., F.L.S. 185 pages, 12 colored plates..... \$1.00

How to Work with the Microscope, by LIONEL S. BEALE. 117 pages, 32 plates..... 85 cts.

Introduction to the Study of Conchology, by CHARLES WODARCH. 119 pages, 4 colored plates..... \$1.00

Illustrated Introduction to Lamarck's Conchology, by EDMUND A. CROUCH, F.L.S. 4to, 22 large colored plates..... \$2.00

The above second-hand books are in good condition, and will be sent, postage paid, on receipt of price.

Address,

"The Museum,"

Box 22,

PHILADELPHIA, PA.

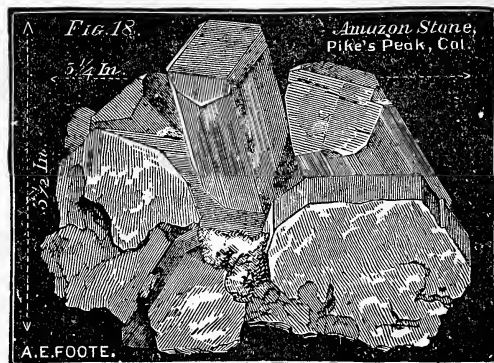
Minerals, Scientific and Medical Books, Shells, Fossils, Birds, Eggs, And all objects of Natural History, are bought, sold and exchanged by

A. E. FOOTE, M.D.,

No. 1228 Belmont Avenue, Philadelphia, Pa.

(Professor of Chemistry and Mineralogy; Fellow of the American Association for the Advancement of Science; Life Member of the Academy of Natural Sciences, Philadelphia, and American Museum of Natural History, Central Park, N. Y. City.)

Specimens sent to any part of the world by mail. Specimen copy of the illustrated monthly, "Naturalist's Leisure Hour," of 32 pages, sent free. Subscription, 75 cents a year. For Club Rates and Premiums, see each monthly issue.



I received the highest award given to any one at the Centennial Exposition of 1876, and the only award and medal given to any American for "Collections of Minerals."

My Mineralogical Catalogue of 100 pages is sent post-paid on receipt of 25 cents; heavy paper, 50 cents; bound in cloth, 75 cents; half sheep, \$1.00; half calf, \$1.25; cloth, interleaved, \$1.00; half sheep, interleaved, \$1.25; half calf, interleaved, \$1.50; (price-list alone, 16 pp., 3 cents). It is profusely illustrated, and the printer and engraver charged me about \$1.100 before a copy was struck off. By means of the table of species and accompanying tables, most species may be verified. The price-list is an excellent check list, containing the names of all the species, and the more common varieties, arranged alphabetically and preceded by the species number. The species number indicates the place of any mineral in the table of species; after it will be found the species name, composition, streak or lustre, cleavage or fracture, hardness, specific gravity, fusibility and crystallization. I have very many species not on the price-list, and some that I had in 1876 are no longer in stock.

Collections of Minerals for Students, Amateurs, Professors, Physicians, et al.

The collections of 100 illustrate all the principal species and all the grand subdivisions in Dana and other works on Mineralogy; all the principal Ores, etc., etc. The collections are labeled with printed labels, that can only be removed by soaking. The labels of the \$5.00 and higher-priced collections give Dana's species number, the name, locality, and in most cases, the composition of the Mineral; the \$5.00, and higher, are also accompanied by my Illustrated Catalogue and table of species.

I have now over forty tons, and over \$50,000 worth of Minerals, mostly crystallized, in stock. It is well recognized that my prices are lower and my specimens better labeled than those of any other dealer in the country. This is mainly due to the immense stock I carry (the largest of minerals of any in the country) and my system of printed labels attached to the specimens.

Catalogue of 2,500 species of Shells, made for me by George W. Tryon, Jr., who has labeled nearly all my shells, 3 cents; printed on heavy paper, with genus label list, 10 cents. I have purchased one or two of the most celebrated collections known, and have now over 2,000 pounds, 3,000 species, and 30,000 specimens of Shells and Corals in stock. Catalogue of Birds, Eggs, Eyes, Skins, etc., etc., 3 cents. Catalogues of Books, 16 pp., each 3 cents. Medicine, etc., 48 pp., 5 cents. (Please specify exactly what class of books you wish catalogues of.)

Send for the *Naturalist's Leisure Hour*, giving full particulars. Specimen copy free. You will confer a double favor by heading this to some physician or other person interested in science.

Please mention where you saw this.

FOR SALE



Indian Relics, Minerals, Fossils, Sea Shells and Coral, Coins, Stamps, Confederate Money, Autographs, Old Arms, Idols, Bronzes, and all Curiosities. Send stamps for price lists, especially prices paid for rare Coins, etc.

R. W. MERCER,

147 Central Avenue,

CINCINNATI, O.

FOR SALE.

A choice collection of Danish Stone Implements, recently received from the Royal Museum at Copenhagen (and therefore of undoubted authenticity), including perforated axes, large and small chipped celts, hand daggers, chipped axes with polished edges, flint nuclei, and many other specimens as fine as can be found in any collection, now offered for sale.

Address, ZNEL, care of THE MUSEUM,

Philadelphia, Pa.

The Museum Premiums.

Desiring to bring the Journal to the notice of all who are engaged in collecting, or are interested in the study of Natural History, the publishers of *The Museum* make the following liberal offers:—

1. **For Three Subscriptions**, one dozen Slides for Microscope, French Educational Objects; or,
2. Six Cabinet Photographs of Peruvian and Chiriqui Antiquities, Ancient Vases, Idols and Gold and Silver Ornaments; or,
3. One large Pocket Magnifying Glass, hard rubber case, two lenses (1 and $1\frac{1}{4}$ inch diameter).
4. **For Five Subscriptions**, a collection of 50 different species of foreign and domestic Mosses, correctly named.
5. **For Six Subscriptions**, a collection of 100 specimens of Minerals, all different, correctly named; or,
6. A copy of the Rev. J. G. Wood's "Common Objects of the Microscope" (containing 400 engravings, in colors) and a *Boy's Compound Microscope*, packed in a polished walnut case.
7. **For Fifteen Subscriptions**, *The Museum* for one year; a fine collection of 100 pressed and correctly named foreign and American Mosses; a copy of Wood's book on the Microscope and a *Universal Household Microscope*, packed in a polished mahogany case.
8. **For One Hundred Subscriptions**, a *Histological Binocular Microscope*, 14 inches in height, with necessary accessories, in an upright mahogany case. This is a splendid \$75.00 instrument.
9. **For Four Subscriptions**, 12 fine Indian Spear and Arrow Points.
10. **For Fifteen Subscriptions**, a splendid collection of 100 beautiful butterflies, all different, carefully prepared and mounted, many of them rare.
11. **For Twenty Subscriptions**, a collection of 25 fine bird skins, all different, including a number of rare species.
12. **For Fifty Subscriptions**, a choice collection of genuine Indian relics,—all unusually fine specimens,—worth over \$35.00, including a stone pipe, a fine piece of ancient pottery (entire vessel), ceremonial badge, perforated tablets, large and perfect spear heads and arrow points of rare forms, fragments of painted and corrugated Pueblo pottery, from ancient ruins in Southern Utah, shell beads, flint awls, haliotis-shell pendants, bone perforators, etc., from ancient graves in California. The first to avail themselves of this offer will secure the best specimens, although all of the sets are very desirable.

(OVER.)

Premiums.

Transportation on premiums 1, 2, 3, 4, 9 and 11 will be prepaid. Expressage on Premiums 5, 6, 7, 8, 10 and 12 must be at the expense of addressees. In specifying premiums desired, please refer to the numbers. Having the addresses, and in most cases, the price lists, of 2000 dealers in Collectors' supplies, in all parts of the world, we enjoy unusual facilities for procuring collections of objects of all classes, at the lowest rates. We shall take pleasure in furnishing an estimate of the number of subscriptions required to obtain anything desired by any collector. It should be understood, however, that we are not dealers, and in no case offer objects for sale.

Young collectors should set to work at once to secure, without expense, some of the above mentioned prizes. Subscriptions should commence as early as possible, in order that no numbers of the Journal may be lost.

WHAT OUR FRIENDS SAY OF US.

"THE MUSEUM equals my highest expectations. The article on 'Rare and Curious Birds' Nests' cannot be excelled. I have no words to express my complete satisfaction for the general 'make-up' and contents."—*W. G. Whilden, Jr.*, Pelzer, S. C.

"THE MUSEUM is a perfect scientific magazine for the old as well as the young, and the style in which it is presented to the public is something neat and original."—*Harry F. Thompson*, Editor *Hoosier Min. and Antiq.*, Indianapolis, Ind.

"The first number of THE MUSEUM cannot fail to impress favorably all interested in the subjects to which it is devoted. It combines useful contents with an attractive setting."—*Daniel G. Brinton, M.D.*, Media, Pa. (Prof. of Archaeology at Acad. Nat. Sciences, Phila).

"I like the make-up very much."—*Charles C. Abbott, M.D.*, Trenton, N. J.

"I am much pleased with the first number of THE MUSEUM."—*Dalton Dorr* (Sec'y Penn'a Mus. and School of Industrial Art), Phila.

"THE MUSEUM is a new candidate for popular favor. . . . It is intended chiefly for young readers, and is admirably adapted to their tastes. . . . THE MUSEUM promises to be a success. It certainly deserves it."—*The Inquirer*, Philadelphia, Pa.

"The number is well gotten up; cover-plate original and appropriate; matter good. . . . 'Collectors and Collections' is another interesting series of columns."—*Herman Strecker*, Reading, Pa.

"It is a well illustrated journal, and its mission is to interest and entertain young naturalists and collectors of all classes, its well-filled pages being devoted to antiquities, coins, stamps, seals, book-plates, autographs, ceramics, curiosities, minerals, plants, radiates, shells, insects, eggs, vertebrates and fossils. . . . The subscription is fixed at the low price of \$1.50 per annum."—*Local News*, West Chester, Pa.

"We have examined with much interest a copy of THE MUSEUM. . . . The number before us opens with a chapter entitled 'Rare and Curious Birds' Nests,' from the pen of Thomas G. Gentry, a well-known ornithologist, and is very entertaining. There are notes of interest on zoölogy, botany, stamp collecting, coin collecting, etc. . . . We bespeak a trial for it on the part of our young friends who enjoy 'making collections of anything.'"—*Bucks County Intelligencer*, Doylestown, Pa.

"THE MUSEUM is the title of a monthly magazine, devoted to the interests of collectors of all sorts (except of the taxes). Archaeology, zoölogy, numismatics, stamps and autographs are among the subjects treated. There is a young contributors' department, and, as the price of the magazine is only \$1.50 a year, it ought to have a wide circulation."—*The Press*, Philadelphia, Pa.

Please send remittances by money order or registered letter.
Address all communications to

The Editor of THE MUSEUM,

P. O. Box 22,

PHILADELPHIA, PA.

THE

NATURE

ART

**AN ILLUSTRATED MONTHLY JOURNAL
FOR COLLECTORS OF ALL CLASSES
AND YOUNG NATURALISTS.**

MUSEUM

ANTIQUE
COINS
STAMPS
SEALS
BOOK-PLATES
AUTOGRAPHS
CERAMICS
CURIOSITIES

MINERALS
PLANTS
RADIATES
SHELLS
INSECTS
EGGS
VERTEBRATES
FOSILS

WM. F. FELL & CO., PRINTERS,
1220 SANSON STREET, PHILADELPHIA, PA.

ARROW
SCREW
HEAD
COIN
PIRramid
SHIELD
FLASK

Entered at the Philadelphia Post Office as Second-class Matter.

SUBSCRIPTION PRICE, \$1.50 PER YEAR.

SINGLE COPY, 15 CENTS.

THE MUSEUM.

An Illustrated Journal, under the Editorial Management of Edwin AtLee Barber, A.M., published, on the first of every month, in the interests of Young Naturalists and Collectors of all Classes.

Amongst the Contributors to the early numbers will be

DR. DANIEL G. BRINTON,
PROF. EDWARD D. COPE,
MR. HENRY PHILLIPS, Jr.,
PROF. THOMAS G. GENTRY,
PROF. J. T. ROTHROCK,
DR. JOSEPH LEIDY,
REV. W. M. BEAUCHAMP,
MR. ANDREW E. DOUGLASS,

PROF. THOMAS C. PORTER,
DR. CHAS. C. ABBOTT,
MR. HERMAN STRECKER,
MR. ERNEST INGERSOLL,
MR. F. RATHBONE, London, Eng.,
PROF. C. F. HOLDER,
MR. WM. H. HOLMES,
MR. EDWARD POTTS,

The MARQUIS DE NADAILLAC, of Paris, France,
CAPT. R. C. TEMPLE, of India,

and many other prominent Scientists and Collectors.

The specific object of the Publishers of *The Museum* is to supply a popular demand of our Youth for a periodical of elevated tone, which shall be, at once, a recognized medium of intercommunication and an instructor in popular science.

Subscription Price, \$1.50 per Year. To Foreign Countries, \$1.60.
Single Copy, 15 Cents.

ADVERTISING RATES MADE KNOWN ON APPLICATION.

PUBLICATION OFFICE, 1220 Sansom Street, Philadelphia, Pa.

PRIZES FOR YOUNG CONTRIBUTORS.

An important feature of *The Museum* will be the Young Contributors' Department. For the purpose of encouraging young investigators in the arts of composition and drawing, the publishers of the journal offer the following special prizes for the best essays on the subjects mentioned:—

SUBJECTS OF ESSAYS.	COMPETITION CLOSSES.	PRIZES OFFERED.
1. On the Habits and Life History of the "Seventeen Year Locust" (with original drawings).	August 1st.	{ A collection of 50 different species of Insects, correctly named.
2. Mineralogy	August 1st.	{ A collection of 50 different Minerals, labeled.
3. Ornithology and Oölogy (with original sketches).	September 1st.	{ Nest and Eggs of Humming-bird.
4. Star Fishes (with original drawings).	September 1st.	{ Five different kinds of Radiates, including rare species.
5. On the Origin and Use of the Bird-shaped Stone, or Amulet, of the N. A. Indians.	October 1st.	{ A series of ancient shell-beads from California graves.

RULES.

1. Essays must be written on single sheets and on one side of the paper only. These sheets must be attached securely at the upper right-hand corner.
2. A fictitious name only must be signed to each essay.
3. This must be accompanied by a small sealed envelope, containing the correct name, age (when under 21) and address of the writer. On the outside must be written only the name which is signed to the essay.
4. Each essay must be accompanied by postage for its return to the writer.
5. Essays must be written by the contestants, without assistance from any one. The drawings must also be made by the writers, from nature.
6. The facts presented must be the results of original observation, and not taken from books or information derived from other sources.
7. No essay must contain more than 800 words, nor be accompanied by more than three illustrations.
Prize essays will be published in *The Museum*.
All communications should be addressed to

THE EDITOR OF "THE MUSEUM,"

P. O. Box 22, Philadelphia, Pa.

Announcement!

The next number of **THE MUSEUM** will contain, in addition to the Regular Departments, an illustrated paper on **A REMARKABLE CREATURE WITH EIGHTEEN THROATS**, by **Prof. Joseph Leidy**, the eminent Scientist; a biographical sketch of **PROF. S. S. HALDEMAN**, with fine full-page portrait, by the **Editor**; **PORCELAIN MONEY OF SIAM**, with illustrations, by **Mr. Henry Phillips, Jr.**, and an illustrated article on **CURIOUS BUTTERFLIES AND MOTHS**, by **Mr. Herman Strecker**.

Forthcoming Numbers of the Museum

Will contain, among other attractions, the following illustrated papers:—

ANTIQUE JAPANESE TOBACCO PIPES, by **Edwin A. Barber**.

ON THE COLLECTION OF OLD WEDGWOOD CHINA, by **Mr. Fred. Rathbone**, of London, England, the best authority on this noted ware.

BOTANY, by **Prof. T. C. Porter**, of Lafayette College, Easton, Pa.

THE STORY OF A BROKEN STONE, by **Dr. Charles C. Abbott**, of Trenton, N. J.

EUROPEAN ARCHÆOLOGY, by the **Marquis de Nadaillac**, of Paris, France, the eminent Anthropologist.

COINS OF INDIA, by **Captain R. C. Temple**, Cantonment Magistrate at Ambala, British India.


MOSSSES AND HOW TO COLLECT THEM, with illustrations of curious species, by **Edwin A. Barber**.

CRYPTOGAMIC BOTANY, by **Prof. J. T. Rothrock**, of the University of Penn'a.

CURIOSITIES IN COINS, by **Mr. Henry Phillips, Jr.**, the eminent Numismatist and Antiquary.

Other illustrated papers, by noted scientists, are also in hand, or promised, on **Indian Pipes, Autographs, Pottery of American Races, Sea Weed, Coins, Stamps, Birds' Eggs, Minerals and Sponges**.

SPECIAL OFFER.

 To any boy or girl who will send us the names of four new subscribers and \$6.00, we will send a copy of **THE MUSEUM** free, for one year.

CLUB RATES:

FIVE yearly subscriptions for \$ 6.00, or \$1.20 each.

TEN yearly subscriptions for 11.00, or 1.10 each.

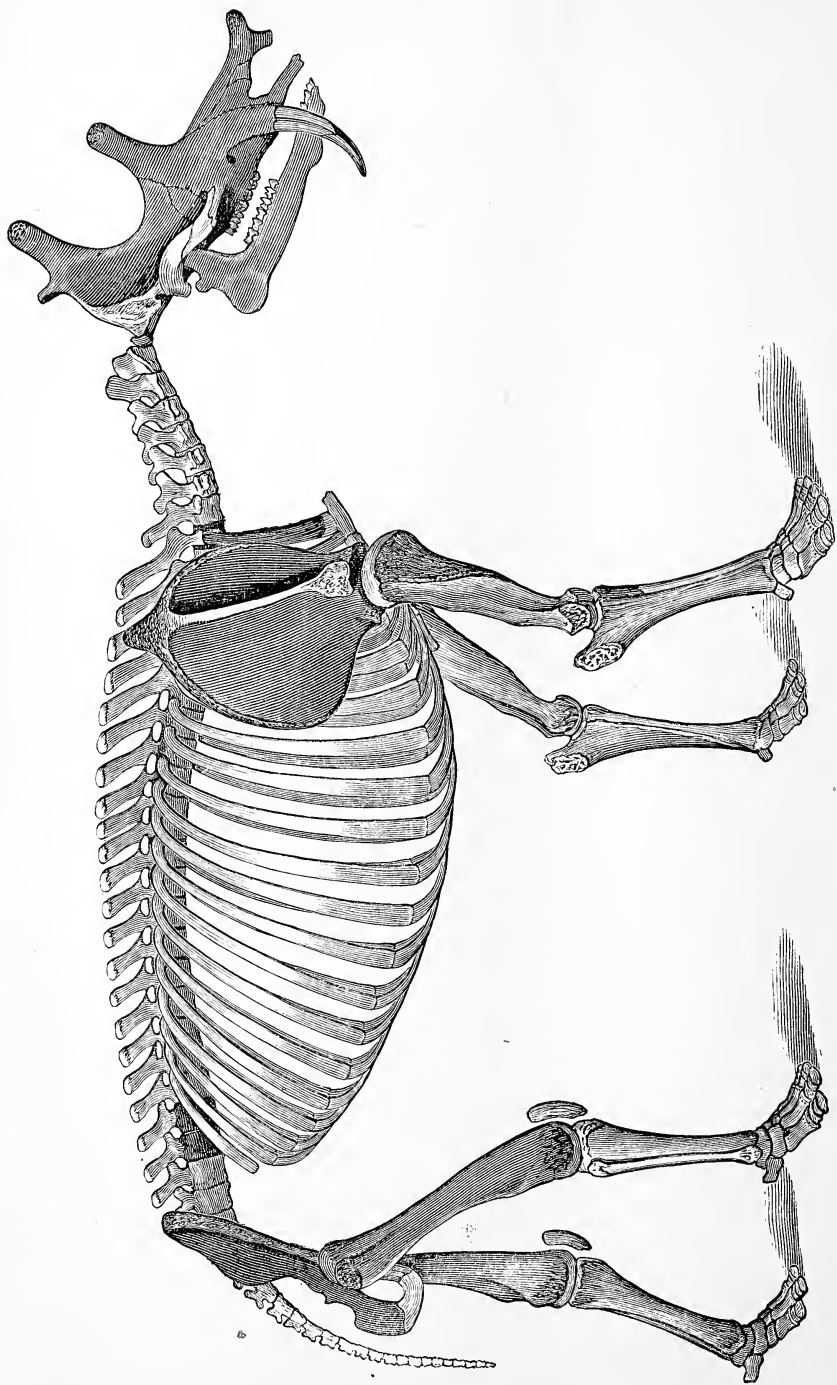
TWENTY yearly subscriptions for 20.00, or 1.00 each.

A limited number of specimen copies of **THE MUSEUM** will be sent out this month to non-subscribers who are known to be interested in one or more of the subjects to which the journal is devoted. If each person who receives a copy will carefully examine its contents, or kindly hand it to a collector or naturalist, the Editor will esteem it an especial favor. It is believed that the journal will commend itself to all who may have the opportunity of glancing over its pages. Each number contains valuable information which cannot be found in any other publication. The scope of **THE MUSEUM** is unique. Collectors, Public Museums and Scientific Societies will find **THE MUSEUM** invaluable in procuring useful information, which cannot be obtained from any other source, relating to collectors and collections in all parts of the world. We already have a large amount of unpublished material on hand, and are receiving, daily, valuable additions, which will be published as rapidly as our space will permit.

Editors will oblige us by forwarding copies of their publications containing notices or reviews of **THE MUSEUM**.

A Trial Subscription.

TO ANY ONE WHO WILL SEND US 35 CENTS, to cover the bare cost of printing, WE WILL SEND FOUR CONSECUTIVE NUMBERS OF **THE MUSEUM**. This unprecedented offer is made for the purpose of bringing the magazine to the attention of those who have not had the opportunity of judging of its merits. We believe that the majority of persons who are thus enabled to examine several numbers will the more readily understand its scope, and that they will recognize its value and BECOME PERMANENT SUBSCRIBERS. The early issues are already nearly exhausted.



LOXOLOPHODON CORNUTUS, COPE.

(Restored, $\frac{1}{3}$ natural size.)

(From *The American Naturalist*.)

THE MUSEUM.

VOL. I.

PHILADELPHIA, JULY, 1885.

No. 3.

A SIX-HORNED GIANT.

—
BY PROF. EDWARD D. COPE.
—

One day the writer climbed the sandstone bluffs that rise above the flats of Bitter Creek, in Wyoming Territory, nearly opposite the Black Butte, in search of some bones that his predecessor, Mr. Meek, was said to have discovered in searching for shells. Reaching to near the line of the highest beds of coal, fragments of huge bones were found projecting from the rocks. Picks and shovels were called into requisition. In course of time the wreck of one of the princes among giants lay piled around his desecrated grave. His single vertebra was two feet four inches from spine to body, and one hip bone measured four feet from front to rear, along the edge.

Another day, and we discovered the gray range of the Mammoth Buttes. We traversed a few terraces of soft tertiary sandstone before we stood on the plateau from which arose this mighty pile of sediment of the old eocene lake. It appeared to form a curved ridge, with a great face of bad lands, which stretched away from its foot on both sides. Its pinnacles rose to a height of from 1000 to 1200 feet above the level of the sage-brush, giving an elevation of about 9000 feet above the sea. We camped at the only spring the region afforded, in view of its bastions and walls.

On close examination I found the bad-lands formed a horse-shoe, which narrowed into a serrate ridge to the eastward. As this ridge appeared to be nameless, I called it the Mammoth Buttes. To the south the summit extended out so as to be covered with level fields of grass and hardy plants, and was inhabited by herds of the big-horn (*Ovis montana*). Within the horse-shoe were ruined peaks, ridges, bluffs, and all the marvels and horrors of the wreck of an ancient cemetery, without shade or water, with nothing but the owl and the dragon to relieve its utter desolation. To the southeast two strange land-marks towered above the rest, known as the Hay Stack and Bishop's Mountain, from their resemblance to the farmer's rick and the conventional mitre.

I resolved to scale these heights from the inside of the horse-shoe, so one day I rode around several miles, to the mouth of a vast cañon that seemed to cut to the heart of the mountain. I followed this cañon towards its head, and entered its highest tributary branch. On one side the precipices rise three hundred feet; on the other conic masses aspire, and are no doubt the *dents* of its keeled backbone. Between them is a little slope of grass and weeds, a sight strangely rare in this region. But fossils I could not find successfully; indications there were not a few, and of large beasts, but nothing sufficiently well preserved to be sure of. I searched carefully, but night was coming on and darkness added horrors to such a scene, so I hastily descended the ravine. As I went I passed some washed stones in its sandy bottom. One was strange in form, and I picked it out. It was heavy and massive, and lo! a bone, unworn and freshly broken from some monster, exceeding in size anything I had yet obtained. I hastened away and resolved to return again, meanwhile speculating on what my bone could mean. I am rarely unable to place a bone or fragment, but this one defied my lore. Part of a skull, but of huge proportions, it looked one while like part of an under jaw, again like the basal support of a huge horn. When I reached my faithful beast night had fallen, and I wrapped the precious fragment in my overcoat, strapped it behind my saddle, and made for camp. As I rode through the brush my straps gave way, my bone fell to the ground, and I had lost the result of my toil.

Another morning saw me on the horse, and following my trail through the sagebrush. Near the mountain I found my bone lying safely away under a bush. Then for my high cañon. Again I was there; again I traversed its avenue. I found nothing, I saw nothing; I left it. I searched the surrounding cliffs, and found a novel companion of the old elephants in a tapiroid quadruped as large as the Indian rhinoceros. At evening I returned and passed down the cañon again; as I crossed a ledge, the idea occurred to me to look back from that point. I looked long and carefully, but saw nothing. I gave it up; the monster was hidden in some crevice or covered by debris, so that I should never find him.

The next morning I started for the gray walls of the Mammoth Buttes. I found my ledge, and remembered my thought to look back from it. I did so, and spied a red mass projecting from the wash. I dug it up; 'twas a bone; beyond I found another, and then part of a large shoulder blade, then the hinder part of a skull; and so I had discovered the grave of another monster, of larger build than any I had seen. I paced the cañon for more fragments; I scanned every foot of the cliff, but without success. At last I wandered toward the spot where a moraine filled its upper end, and looking at my feet as I walked, saw again the welcome red-rusted bone enter the rock. Here was the fountain head. Pick, sledge and chisel soon exposed an enormous skull with a perfect set of teeth, a huge polished tusk, of sabre form, curving downward from the jaw, and a pair of massive horns rising from each eyebrow. His muzzle was soon exposed; its end had a pair of massive overhanging cornices, which met in a deep notch at the middle, and below this point the conic end

of the nose projected downward. Removing a mass of rock, the shoulder blade was exposed, a huge plate from two to three feet wide, and close alongside, his pelvis, nearly complete. When I had laid the hip bones bare, their expanse measured about four and a half feet. Better, if possible, than these, I exposed the perfect thigh bone, with a head as large as a cannon ball. This ran directly into the cliff, which had a dangerous face. Masses, tons in weight, were ready to drop at a moment's notice, and every blow of the sledge seemed to loosen them the more. For four days I worked with my men in this remote altitude, before we secured all.

At length we wrapped up the invaluable relics of this ancient king, whose mausoleum now is the Mammoth Buttes, more perennial than the tomb of Cheops, more vast than the labyrinth of Minos, and bore them over the "wind pass" and down the great curved cañon. The skull weighed nearly two hundred pounds, and it was found to be no light toil to carry it up the high cliffs that bounded the cañon to the north, then slide it down another declivity of two hundred feet, then over another vast mass of bluffs, and finally down a rocky precipice of three hundred or more feet, to a point accessible to our wagons, altogether a trip of five miles in a straight line from the sage-brush.

My inexplicable bone turned out to be the base of a horn of one side of the posterior angle of the cranium, showing that this animal possessed three pairs of horns, two of which rose upward and backward, with a slight divergence, one projecting forward over each eye, and a pair of flat prominences overhanging the sides of the base of the elongated snout. Picture, then, to yourselves a narrow head, extending obliquely downward, presenting its eye-horns forward, terminating in a long nose overhung at the base by flattened processes, with short, flat, knife-edged tusks curving backward, and a small under jaw; its body like that of an elephant, with high withers and a sloping rump, terminating in a short tail; its limbs rather shorter than those of the living elephant, but with the same short, stubby toes, and the knee below the body, as in the elephant, bear and monkey. The same ambling gait, the same huge ears, and the little twinkling eyes, all betrayed in life the elephantine kinship, while the hollow forehead and its surrounding horns, if not bearing the stamp of the elephant's wisdom, marked him as a king, and his shining weapons showed his ability to maintain the claim. The long canines were, no doubt, for defence chiefly, and may have been used in pulling and cutting vines and other branches of the forest, and the horns furnished formidable weapons of defence. This huge animal must have been of defective vision, for the eyes were so overhung by the horns and cranial walls as to have allowed him to see but little upward; the muzzle and cranial crests obstructed the view, both forward and backward, so that the beast probably resembled the rhinoceros in the ease with which it might have been avoided when in pursuit.

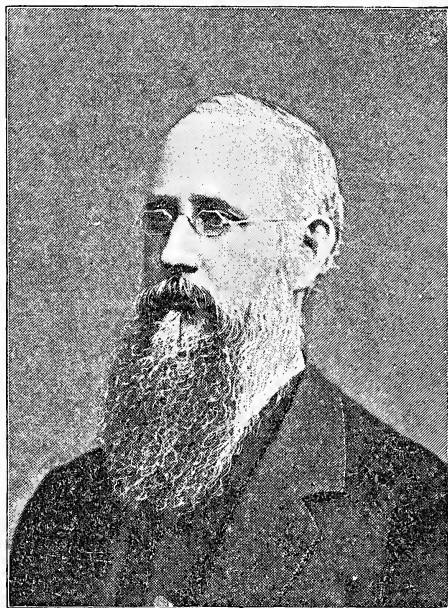
This I named the *Eobasileus cornutus*, and seeing reason afterwards to anticipate that it represented another generic form, framed for it the name of *Loxolophodon*.

FOR THE MUSEUM.

A REMARKABLE SCIENTIST AND HIS COLLECTION.

BY EDWIN A. BARBER.

Men of science may be divided into two classes: First, those whose surroundings have been such that they have been enabled to gratify their natural inclinations without stint, and by easy stages have obtained prominence in the world of science; second, those who, in the face of frowning fortune, have, by dint of indefatigable perseverance, succeeded in carving their names high up on the ladder of fame. Of the latter class is Mr. Herman Strecker, of Reading, Pa., well known the world over as one of the most eminent authorities on butterflies and moths. To such men we are largely indebted for our knowledge of the wonderful things in nature.

*Herman Strecker*

Mr. Strecker, who is of German parentage, was born in Philadelphia, on March 24th, 1836. At a very early age he evinced a fondness for scientific pursuits. Although interested in all branches of natural history, and forming collections in many of them, he, by degrees, centered his attention on insects, and finally, at about the age of nineteen, on the lepidoptera (butterflies and moths) alone, of which he has formed one of the finest and largest collections known, far exceeding all others in this hemisphere, whether public or private, and holding first rank with the greatest of the Old World.

An amusing paragraph has been going the rounds of the newspapers for some time, to the effect that the subject of this sketch was a day-laborer—an ordinary stone-cutter. Mr. Strecker is an architect, designer and sculptor by profession—an artist of remarkable talent. By night has been accomplished all the enormous labor and correspondence required to form his collection, as well as the writing of his works and drawing and lithographing the numerous plates which illustrate them. It is by rigid systematizing that he has accomplished so much; no time is lost; every minute must count. Arising at 6 A. M., he is at his business an hour later; at 1.30 he dines; from 2 to 6 P. M., again at pencil or chisel; then come the evening and night hours, which, up to midnight, are devoted to his favorite science; then supper, followed by a pipe or segar, and a half hour's reading of a primer or a tract, a newspaper or a novel, or anything else un-scientific. He retires at about 12.30, for the night, this having been the routine for over a quarter of a century.

It is well worth a visit to Reading to examine his magnificent collection. It contains over *seventy thousand* examples, gathered from every corner of the globe. Every climate, every country, every altitude has contributed its hundreds of curious and beautiful examples of winged life. Among the great rarities is a specimen of *Colias Boothii*, taken by the second Ross expedition in search of a northwest passage, in 1827-'29. This is the only example of that species in any American collection. There are also three of the great *Papilio Antimachus*, from equatorial Africa, of which only about a dozen are known. Then there is the argus moth (*Eustera argus*), with enormously long, slender, tail-like attachments to the hind wings; whole suites of the splendid golden Cræsus and Lydius butterflies, from Halmeheira; the curious dead-leaf butterfly (*Kallima paraleekta*), from China and India; the wonderful Parnassius butterflies, from 15,000–18,000 feet elevation in the Himalayas and other great mountain ranges; enormous *Cossus*, from Australia, which are eaten by the natives; the owl moth of Brazil, *measuring a foot across the wings*; the resplendent Rhipheus flies, from Madagascar, which have no rival in nature to their beauty—the brilliancy of the humming-bird, the glitter of gems fading in comparison with them. There are also monsters, half male and half female, or those with one wing partly of one sex and the rest of the other; there are albinos, melanos, hybrids, monsters with an extra wing; every imaginable variety or freak. There are butterflies that look like wasps, like bees, like *lichens*; moths with peculiar markings resembling skulls, anchors and the figures 88. There are examples collected by trained collectors in every quarter of the world, by Indians, by Esquimaux, by explorers and travelers, by Jesuit missionaries, by any and every one whose services could be enlisted.

This truly wonderful collection is the result of more than thirty years' study and systematic collecting. Mr. Strecker has been, during this time, in intimate communication with every lepidopterist of note in the world. For some specimens he has paid as much as fifty dollars each. Being endowed with great artistic talent, he has published many valuable works describing new species, etc., illustrated by finely-executed lithographs engraved by himself, and in many cases colored in a life-like







manner by his own hands. In many instances, in his earlier work, he has also set up the type and done the printing. Among his many contributions to science may be mentioned a catalogue of North American butterflies, which is the most complete ever published, containing all the synonyms, and many new species, besides a vast amount of other matter that makes it indispensable to every student of lepidoptera.

But it is impossible to do justice to this marvelous collection in the limited space at our command. We would advise those who are interested in such things to visit the genial collector at his hospitable home, which, amidst the beautiful hills of Berks, has been built with a view to the especial requirements of his collection, promising them that they will come away feeling that they have enjoyed a rare treat, and that, like the Queen of Sheba, "the half had not been told to them."

FOR THE MUSEUM.

TYPICAL PIPES IN VARIOUS COLLECTIONS.

Ancient Indian tobacco pipes were made in a countless variety of designs, but among them we find certain characteristic forms, which indicate their approximate age or the localities where they originated. The most marked of these are the true mound or platform pipe, with curved base, the sculptured stone idol or human head bowl, the trumpet form with curved stem (usually of clay), the disc or shield type, the inverted bottle-stopper, and the straight tubular form, such as is found in ancient graves in California. In the table below we give a partial list of archæological collectors who own such specimens, and the number of each. At the heads of the columns are small engravings of typical specimens. The examples enumerated are, in most instances, of almost the exact form of the cuts; in others they are modifications.

NAMES OF COLLECTORS.						
Mr. A. E. Douglass, New York, N.Y.	1	2	9	6	3	11
Dr. C. S. Arthur, Portland, Ind.....	3	1	...	2	...	4
Mr. A. F. Berlin, Allentown, Pa.....	...	...	...	1	...	...
Dr. G. W. Galloway, Findlay, Ohio..	1	...	...	...	...	...
Mr. J. M. M. Gerner, Muncy, Pa.....	...	...	1	...	...	...
Rev. W. M. Beauchamp, Baldwinsville, N. Y.....	...	...	1	...	...	...
Mr. Geo. S. Mephram, St. Louis, Mo.	...	...	...	1	1	1
R. S. Robertson, Esq., Ft. Wayne, Ind.	3	...	...	...	...	...
Mr. N. V. Johnson, Brookville, Ind..	1	...	...	...	...	...
Mr. M. A. Gavitt, Madison, Ind.....	...	1	...	...	...	...
Mr. A. W. Palmer, Clockville, N. Y.	...	...	6	...	...	...
Dr. Gabriel Miesse, Greenville, O...	...	1	...	...	...	...
Dr. J. C. Neal, Archer, Fla.....	...	...	...	...	1	...
Dr. Geo. J. Engelman, St. Louis, Mo.	1	...	...	...	...	...
Mr. J. W. Calkins, Santa Barbara, Cal.	...	...	...	...	...	6
Mr. H. C. Ford, " " " "	...	...	...	...	...	6
Maj. W. S. Beebe, Connecticut.....	...	...	1*	...	...	...
Mr. W. W. Tooker, Sag Harbor, N. Y.	...	...	...	...	...	1

* A remarkable stone pipe, found near Santa Fé.

Natural History.

Zoölogy.—AN AGED TORTOISE.—During a recent ramble, I came across a common box tortoise (*Cistudo clausa*) which, as is my custom, I turned over, to see what name, if any, might be engraved upon its under shell. To my surprise and delight, the following was found to be distinctly cut upon the plastron, "J. Abbott, 1821." A close examination conclusively showed there could be no mistake in the date, and it was evident that sixty-four years ago my grandfather had found and marked the tortoise in the manner described. I found the animal within a hundred yards of the house then occupied by my grandfather, and it is probable, therefore, that at or near this same spot the creature was found and marked more than half a century ago.

The tortoise was by no means a large specimen, measuring but four and one-half inches in length, by a little less than four in width. Evidences of great age, however, were not wanting. The edge of the upper shell had been broken, and the fractured part worn very smooth. The yellow markings of both the upper and lower shells were scarcely to be traced. There was no evidence of any appreciable increase in size since the name and date mentioned were cut. C. C. A.

SOMETHING TO LOOK FOR.—In the summer of 1860 Dr. Leidy captured a specimen of the beautiful tree-toad, known scientifically as *Hyla Andersonii*, in southern New Jersey. Since then no others have been found, or, at least, have been recorded from the same locality. This, then, is something for our young naturalists to look for. It is highly improbable that Dr. Leidy's specimen was the last of the race in New Jersey, so it is to be hoped others will be recorded, and better yet, something learned of its habits. It may be recognized by its bright pea-green color, with sides dotted with yellow, and a purple band on the side of the head.

ANOTHER DESIDERATUM.—There is not, in the whole range of zoölogical literature, one

word about the breeding habits of the fence-lizard of the Eastern and Middle States—the *Sceloporus undulatus* of naturalists. Will not some contributor to THE MUSEUM give us an account of this creature, and particularly, when and where it lays its eggs, and how the young are cared for until able to shift for themselves? C. C. A.

Since our last issue, the following additions have been made to the Philadelphia Zoölogical Garden:—

One whistling swan, a bald eagle, wild turkey, loon, great horned owl, red-tailed hawk, two crows, a sulphur-crested cockatoo, a horned lizard, a water turtle, six alligators, a pine snake, a painted box tortoise, two Gila monsters (*Heloderma suspectum*), one wild cat, one raccoon, a common rabbit, four white rats, one oryx (*Oryx leucoryx*), three buffaloes and five prairie wolves.

Mr. Edward Potts reports the discovery of sponges (*Meyenia plumosa*, var.—) growing on trees (*Strombocarpus pubescens*) on the Colorado river, 59 miles S. S. W. from Fort Yuma, California, by Dr. Edward Palmer. The sponges are nearly spherical in shape, and some of them are almost six inches in diameter, the dark masses in a dried state hanging from the pendant boughs by thousands, like wasps' nests. Only during portions of May and June are the branches of the trees under water, and it is, therefore, believed that the sponges are developed from the gemmule or statoblast within the short period of three to six weeks.

Ornithology and Oölogy.—In *Nature*, of May 21st, Mr. Charles Bingham, Deputy Conservator of Forests, at Henzada, British Burmah, records the discovery of the nest of a brown woodpecker in an arboreal ants' nest (a small black and red species of *Myrmica*). The interior of this hornet-like structure was hollowed out, making a space ten and a half inches in diameter. The entrance tunnel was bored horizontally in the side of the spherical mass, being about four inches long. The female bird was secured, with two eggs.

GRAKLES.—Crow-blackbirds are both migratory and resident; for never a winter passes that a few are not seen along the river shore. Indeed, when the usual January thaw arrives, quite a host of them are to be found feeding on the mud-flats, when these are not covered with ice. A limited number of hardy individuals, finding sufficient food, prefer the discomforts of remaining throughout winter, to the exertion of migration, and so tarry with us the year through. . . . The nest is usually a bulky and strongly built structure, every twig and blade of grass being well intertwined with the others; but there is one very prevalent defect in the architecture of these nests: They are insecurely anchored to the supporting branches of the tree. One such nest, that fell late in the summer, I took pains to unravel, twig by twig. It was a tedious task. There were four hundred and eighty-two twigs, and two hundred and four blades of grass, used as a lining. With these were bits of inner bark of certain plants, a number of chicken feathers, and a long, black shoe-lace.

The eggs once hatched, something like work commences. From early morning until late in the evening, so long, indeed, as there is sufficient light to enable them to see a worm, the male bird, for the first week, and then both parents, hunt for and carry to the five hungry infants their food. To get an approximate idea of the amount of food required to keep these young birds in growing condition, I timed the movements of a pair. I chose the hours from 10 to 11 A. M., and 2 to 3 P. M. In these hours each bird made thirteen trips to and fro, carrying, in every case, a worm, larva or large insect—living animal food in every instance. The five young birds were supplied, therefore, at a rate nearly equal to every other minute; but as there were five of them, each bird got a "square meal" at least once in every ten minutes. This feeding was kept up for nearly ten hours of each day, there being less activity in the matter toward evening, when the parent birds were probably taking their own meals; but at this rate, it is a matter of two hundred and sixty worms a day, or fifty-two for each young bird every twenty-

four hours. What digestion! Of course this must be active, and the fact is evident, as in every departure from the nest ejecta are carried away in the beaks of the parent birds, and dropped, often at a distance of a hundred yards from the nesting tree.

The young birds are twenty-five days old when they leave the nest and are supposed to shift for themselves. In the meantime each has been supplied with fifty-two worms a day, or thirteen hundred during its life in the nest; and the five collectively have consumed sixty-five hundred worms, larvæ or insects. But there were eleven of these nests, which, therefore, means the destruction of seventy-one thousand five hundred worms or insects. Again, seven pairs of the colony of twenty-two birds raised a second brood, which means a further check upon insect life of some forty-five thousand five hundred more worms and grubs, or a total of one hundred and seventeen thousand of insect life in larval or mature state. The food of the parent birds has not been considered in the above calculations; this added, and we have a grand total of about one hundred and fifty thousand forms of insect life destroyed, all of which would have proved more or less destructive to the growing crops.—*From Dr. Charles C. Abbott's forthcoming book, "Upland and Meadow."*

EARLY RISERS AMONG BIRDS.—While recovering from an attack of typhoid pneumonia in June, 1878, sleep being banished from my eyelids by the ennui incident to a protracted illness of some two months, I frequently spent the early morning hours in listening to the delightful strains of music which the breezes bore to my bedside through the partially open windows. Noticing that the same feathered choristers were, by some good genius, thus made to contribute to my pleasure and happiness by drawing my thoughts from self and fixing them on the outer world, and observing that these entertainments were given singly and at about the same hour of the day, I arranged with my wife that the timepiece should be so situated with respect to the burning lamp that I could plainly see the

figures upon its face. All things being in readiness, I awaited developments. The robin, as usual, took the lead. His first note was struck exactly at 3.30, and for nearly a half-hour he ruled the realm of song. Two weeks and more I timed him, but he seldom, if ever, varied from those figures. The hour of five found the summer yellow-bird and song sparrow sufficiently awake to add their quota of delight. But scarcely had they thrilled the fields and groves around with their sweet cadences, than they were hushed into silence by sounds more shrill than jay or crow e'er uttered, for the sparrows—those saucy, hateful gamins from Albion's shores—had now essayed their matins. At five, outdone by heat and worry, they ceased awhile their clatter, and anon was heard the twitter of the redstart, as he glided among the branches, or that of the barn swallow, as he gracefully cleaved the ether. Six o'clock ushered in the tinkling, bell-like utterances of the wood thrush, and, as he poured from lofty tree his matchless music, all other minstrels slunk away, or hid themselves for shame. The catbird and the thrasher, in the intervals of his silence, would, by their many-voiced language, command attention, but always did their best when he had sought the bush for shelter. Later on, the wren and bluebird charmed me with their notes, but, by the time the clock had pealed the hour of ten, my friends had flown, I knew not where, and I was left, my thoughts my only solace.

THOMAS G. GENTRY.

Botany.—We occasionally meet with interesting examples of abnormal growth in plants. Specimens of *Claytonia Virginica* are sometimes found (as was recently the case in West Philadelphia) with *seven* petals, and Rev. W. M. Beauchamp, of Baldwinsville, N. Y., writes us that he saw this season a double *Trillium grandiflorum*, which had six sepals, longer than the petals, eighteen petals and the usual three stem leaves. The color was a greenish white. The same gentleman reports the discovery of *Listera australis* as far north as Baldwinsville.

Mineralogy.

JEFFERISITE.—Three miles south of West Chester, Chester County, Pa., near the celebrated "Birmingham Serpentine Quarry," is found a micaceous-looking mineral called "Jefferisite," named after its discoverer, William W. Jefferis, Esq. It was first brought to the attention of mineralogists about the year 1853. Specimens being sent to Prof. Brush, of Yale College, he referred it as a variety of *Vermiculite*. In 1866 he gave it a more careful examination, and announced it as a new mineral, a hydrous silicate of magnesia and iron.

It occurs in veins, in serpentine, in crystals or crystalline plates of hexagonal form, like mica, cleaving readily into thin laminæ, which are flexible, but not elastic; the surface of the plates being marked by lines crossing at angles of 60 and 120 degrees. Hardness, 1.5; gravity, 2.30; color, dark yellowish-brown or brownish-yellow. It exfoliates very remarkably when placed in the flame of a lamp or gas-light, which peculiarity, in connection with its crystalline form, will distinguish it from all other minerals.

In reply to one of the A. A. queries in your first issue, I would say that when the Japanese quartz, that is used by them in making their famous "crystal balls," is examined in the rough state, it frequently shows a decided cleavage plane. This variety of quartz is even clearer than the clearest crystals we have. There is something attractive in the pellucid softness or *richness* of tone in its natural condition. To be sure, these masses are frequently portions of huge crystals, but it is entirely unlike anything we have. A piece I examined a short time ago, and at present have in my cabinet, is very translucent, and possesses as true a cleavage plane as any feldspar ever did. But this peculiarity is confined to the central plane; all other parts give the usual conchoidal fracture.

W. S. BEEKMAN.

Archæology.

FOR THE MUSEUM.

IDOLATRY AMONG THE INDIANS OF PUGET SOUND, WASHINGTON TERRITORY.

BY REV. M. EELLS.

"Are there any idols among the Indians here?" was the question which was asked me by a visitor not long ago. I will reply in this article. I had not been here long, before I became satisfied that the principle of idolatry was here.

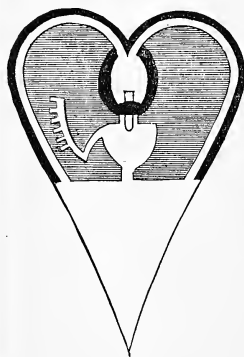


1

They found certain stones or made sticks and posts in which they believed certain powerful spirits dwelt at times, and it was not safe to abuse these sticks, or the spirit which sometimes lived there, and which always watched over and took care of his earthly home, would become angry, so that it would take its revenge in some way, especially by making the people sick. Generally these sticks are posts which are used to support the houses used in their greatest festivals, but sometimes are in private houses, and occasionally are placed near the head of the bed, as a protector. Figures 1 and 2, about eight feet long, are posts, set on large cross beams, to support the ridge pole, in a large communal house, No. 2 having been unveiled with great ceremony. (In the engravings the black portions represent *red*, the horizontal shading, *blue*, and the vertical, *black*. The unshaded portions represent *white* paint). Figure 3 was a board in another large house, where several hundred Indians gathered for a week's festival. At this time a few persons gave to their invited friends several hundred dollars in money and other valuable things, and it was said that the spirit which dwelt in it really gave away the presents.

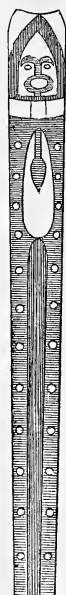
To show how much the people were afraid to molest these, I will relate the two following incidents: A half-breed boy of fourteen or fifteen years was telling a lady how afraid some of the people were to touch these sticks and stones, when the lady said to him, "You would not be afraid to touch them, would you?" "I—I don't know," he replied, slowly. Here he was, brought up mainly among whites, in school ever since he had been old enough to go, and yet really afraid to touch them.

Nine or ten years ago, when I had been among these Indians only a year or two, as I wished to obtain something of the kind for my collection, I asked one Indian, who was so civilized that he cared nothing about these things, whether I would be likely to find anything that would suit me at an old communal house four miles distant, which had been deserted for years' and of which



3

nothing remained but the posts and beams. He said that he thought I could. Accordingly, I went there, and supposing that all had been removed which was of value, I cut down the best carved one, about eight feet high and two feet wide, put it in my boat and started for home. On my way home I began to think that, perhaps, it would have been best first to have asked the chiefs about it. Stopping to see one of the younger Indians, I told him about it, and he seemed to think nothing of it. But on rowing up to another house, an old man came to me, and on seeing it, said, "The devil has got you now!" He then told me how afraid the peo-



2

ple were to have such things treated in that way, and also told me the owner's name. I told him the circumstances of my getting it, and that I did not intend to do anything wrong. He was satisfied of that, but still was afraid. As he was related to the owner, who was then about twenty-five miles away, I offered to leave it with him until the owner's return, but he said that he did not dare to have it about the house. Seeing one or two others, I explained to them about it, and brought it home. One of these told me that when the large beam, which was supported by the post, fell, it made the spirit very angry, and that it would probably send some sickness upon the people.

When the owner returned I talked with him about it, and offered to return it, but he said no. I then offered to pay for it, but he again said no, that if I had gone to him before getting it, and he had sold it to me, the Indians would have thought it very bad, but as it was cut off above ground, it could not be put together; it was done, and could not be helped, and he appeared good-natured. I, however, gave him a sack of flour and some sugar, as a peace offering, and he has ever since been quite friendly to me. About two years afterward, there was considerable sickness among the Indians, and some deaths among the children, and one Indian hinted to me that I had caused the sickness, by making that spirit angry.

I still keep it. Occasionally the Indians speak about it, but their ideas on this subject have changed greatly within the last four years, and they have, apparently, long since ceased to have any anxiety about it. A year or two ago, as I was moving it, an Indian came along and offered to help me. I asked him if he was not afraid of it. He said no, and picked up one end and carried it to where I wished to place it.

At another large house, built later than the first one, were a number of these posts. The house was crushed by a great snow a few years ago, and the posts lay scattered on the ground. I wished much to get hold of some of them, but judging from my first experience, concluded I had better be careful. So at first I

simply made drawings of them. But two years ago, knowing that the ideas of the Indians on the subject were changing, I ventured to ask the owner, who told me plainly that he cared nothing about them, and that I might go and get them if I wished. So I obtained four, which are about eight feet long, and at the same time I knew that an Indian cut up one of the sacred beams for rails.

The principle of idolatry was in all this superstition; but still the sticks were of such a shape that they could not properly be called idols. I had been here four years before I saw what could be called by this name, and have never seen but this one. As I visited them at one of their religious gatherings, in 1878, I saw Figure 4. It was about four feet long, roughly carved, with the face and body of a man, but with no legs or feet, the lower part being set into the ground, and around this they performed their incantations. The eyes were silver quarter dollars nailed to it, and at the time it had no clothes on, except a neck-tie of red cloth, white cloth, and beaten cedar bark. It is said to have been made by the father of a very old man, and is kept secreted in the woods when not wanted. I saw it several times after they were done with their performance, and the Indians willingly allowed me to make a drawing of it. It has since been carried off to the woods again.

The Indians have the following tradition: A long time ago a man made an image of a man, into which his guardian spirit entered, and over which it had considerable power; even to make it dance. Two young men, however, did not believe this, and made sport of it. At one time, when many people were assembled in the house where it was, these young men were told that if they did not believe it could dance they might take hold of it and hold it still. But when they did so it began to dance, and soon, instead of their holding it still, it made them dance with it,



4

one holding to an arm on each side of it. Nor could they stop it, or even let go, but after dancing for a time in the house, it took them outside and started toward the salt water. The people, afraid that something would happen, followed, trying to stop it, but could not do so. It danced to the water and into it, and made a plunge head foremost, when all three were changed into the fish called the Skate, which still lives in the water.

Mr. Albert D. Hager, Librarian of the Chicago Historical Society, possesses a copper spear-head which contains blotches of silver, which stand out above the general surface of the copper. We understand that this specimen is one of seven fine spear points which were plowed up near Sheboygan, Wis., in the neighborhood of a series of mounds, and that the set may be purchased for the nominal sum of fifty dollars.

Philately.

WATER-MARKS.

[PRIZE ESSAY.]

BY WILLIAM A. JEFFERIS.

Water-marks are generally employed by a large number of governments in their stamped paper. They are to be found in the French stamped papers of the seventeenth and eighteenth centuries. The designs are of infinite variety. Their object is to increase the difficulties in counterfeiting, and to assign a date to the using of the paper, for they are to be found, on close examination, in nearly all the early issues of a great number of countries. The manner in which the water-mark is impressed on machine-made paper is by means of a fine light wire cylinder, with a wire-woven pattern. The water-mark in the paper of different manufactures, such as writing paper, etc., is produced by coarse wires of the required designs attached to the moulds, so as to cause the layer of fibre to be somewhat thinner on their lines. Various devices formerly made use of in this way gave names to sorts of paper to which they

were applied, and the papers have still retained these names: thus, "Post paper," from the design of a postman's horn; that which was called "Poi paper" had the design of a pot or jug, and so forth. Water-marks upon commercial paper, as bank notes, checks, etc., serve a useful purpose in rendering forgeries more difficult. A friend of mine told me that on one of his trips to Europe he had occasion to have a five-pound note changed while in London, so stepped into one of the banks and presented it to the paying teller, who, immediately perceiving that he was a stranger, held the said note up to the light and examined it carefully. My friend states he afterwards discovered that the teller was looking to see if he could detect anything in the water-mark, or if it was in the note. Latterly it has been found that the perfection of the work, and the small intrinsic value of the stamps, were much more serious obstacles to their being counterfeited. The study of water-marks has been neglected until within a short time. The early catalogues on postage stamps merely make mention of the various water-marks on paper and in the postage stamps. The finding of these water-marks is often quite difficult. In some cases they are easily found by holding the stamp to the light; we have found that it is much more easily done by placing it face down on a dark object. In this manner the design of the water-mark plainly appears.

None of the United States stamps contain water-marks; but the remarkable perfection of the engraving is sufficient security against counterfeiting. The envelopes have been and are yet made out of a paper having this water-mark. A first line contains the capital letters P. O. D.; the second one the letters U. S. The same inscription is reproduced one centimetre below, and in an oblique line to the end of the sheet.

It is from this paper that the envelopes are cut, therefore it is easy to understand the numerous positions the inscriptions will occupy through the hazards of cutting. This water-mark is found on both white and buff paper. The explanation is the same for

Canadian. The letters U. S. P. O. D. represent United States Post Office Department. The 3-cent on blue letter sheets contain only once in the centre U. S. P. O. D.

The New South Wales 1d. stamps for newspaper bands show a new disposition of water-marks; the sheet contains eight stamps, in two parallel rows, for an equal number of bands. The paper employed is a very strong laid paper. On one of the sides we find a water-mark, which is complete with every four bands. The other side has no water-mark; this is the reason we find bands with and without water-marks. This last, of about five centimetres in height, consists of two ornamented lines forming the top and bottom, between which we find the letters N. S. W. The spaces are filled by scroll ornaments. The stamps of Great Britain, of the issue of 1850, have, in each of the four corners of the stamp, water-marks representing the heraldic flowers of Great Britain, the rose, shamrock and thistle. The Russian envelope, 10 kopecs, black, of the issue of 1848 to '54, bears a handsome water-mark representing the Russian coat-of-arms, surrounded by a sort of mosaic like the paving of a vestibule. Some of the stamps of April 1st, 1867, of Switzerland, bear a water-mark representing a dove with an envelope tied around its neck, and in the act of flying. Those of Prussia, of the issue of 1850-'56, bear the laurel wreath. The first lithographed stamps of Lubeck, of 1859, were completely covered over with roses, while those of Hanover, of the first series, 1850-'55, bore a water-mark representing oak leaves. The presence of this mark served to distinguish the 3 pfennige claret of the first series from the 3 pfennige rose of the third series, which was a reprint, without the water-mark. The envelopes of the first emission of Bremen were printed on plain white paper; the later ones bore on the front a large castle, representing the arms of Hamburg City. It measured 7 x 5½ centimetres. The first emission of the Tuscany stamps (lion), of the issue of 1849, was upon bluish paper, with a water-mark consisting of large sized ducal crowns, occupying the space of several stamps, repro-

duced several times and divided from each other by parallel lines. Therefore, one finds on the stamp either straight or curved lines, or circles, the last two figures representing the bands and pearls of the crown.

Numismatics.

NOTES BY HENRY PHILLIPS, JR.

UMBRELLAS.

The "*Skiadeion*" was a mystic symbol in some of the Grecian festivals, the Romans selecting an umbrella as part of the judicial insignia, when dispensing justice in the basilica. From this latter custom some have believed the Cardinal's hat to have taken its



COIN OF SIAM, REDUCED.

origin, as being a modification of the umbrella in the basilican churches.

Among the Egyptians the right to possess an umbrella was a mark of distinction only accorded to "persons of quality." Assyria reserved it for royalty alone.

In India it is considered as an emblem of royalty far more important than even the crown itself. The Mohammedan sovereigns of India were careful about permitting the use of the umbrella by any others than themselves. The Hindús were not so exclusive; the *chhâta* could be carried by others than kings, but only, however, if they were people of distinction and rank. The king was, *par excellence*, the *chhât-rapati*, the lord of the um-

brella, and, even as late as 1881, the title was held in higher estimation than Rajah or Maharajah.

The King of Burmah is proud to call himself "the Lord of the twenty umbrellas;" the Emperor of China takes that number of parasols with him to the hunting field, and on a Siamese coin of the present dynasty the royal crown is represented between the parasols of state.

In the *Mahábhārata*, mention is frequently made of the umbrella as a mark of royal dignity. The gift of white umbrellas having one hundred ribs is enjoined as a religious action especially calculated to ensure to the donor a long residence in the heaven of Indra.

Naturally, therefore, umbrellas were of two kinds, royal and ordinary. For kings, the color was *red*; for princes, *blue*. The Shah of Persia is entitled to a red umbrella. In Corea a *red umbrella* and a *violet fan* are the appendages of royalty.*

Upon the coins of Herod Agrippa the younger appears something very like an



umbrella, with the inscription "*Basileos Agrip*," and on the reverse three ears of corn. Spanheim believes this to represent the tabernacle or tent of the Israelites, alluding to

their feast of Pentecost. The ears of corn may refer also to the same feast, in which first fruits were offered.

It seems strange to think how many out-of-the-way corners there are in numismatics that can be profitably explored. Mr. Charles Von Ernst, of Vienna, has just published a well-arranged and valuable work on *coins, medals and tokens relating to mines and mining*, illustrated with 62 handsome reproductions of pieces referred to in the text, of

* An Italian heraldic writer states that "a vermilion umbrella in a field argent symbolizes dominion."

which there are described in all one hundred and fifteen.

Another interesting work has just appeared from the pen of Leo F. Kuncze, O. S. B., Professor in Martinsberg, near Raab, in Ungarn, on the subject of *Consecration Money*.

Mr. Isaac Myer (Chairman of the Hall Committee of the Numismatic and Antiquarian Society of Philadelphia) has just published, for private circulation, one hundred copies of an essay on the Waterloo medal of Pistrucci, which he read before the society some years since. The volume, which is printed in the highest style of art, contains a number of beautiful illustrations, and will be a welcome contribution both to the literature of Numismatics and the history of Art.

Mr. T. Whitcombe Greene contributes a pleasant article to the Numismatic Chronicle (1885, Part I), on the medals of the Renaissance, in relation to antique gems and coins.

Collectors and Collections.

Prof. D. B. Brunner, of Reading, Pa., has a collection of upward of 3000 specimens of Indian antiquities, for the greater part from Berks county.

The conchological collection of Dr. W. D. Hartman, of West Chester, Pa., is one of the most extensive private collections in the United States. It embraces nearly 6000 species and probably 25,000 specimens. It includes many rare shells from all parts of the world, the result of thirty years' collecting. His series of *Partulas*, which includes 190 different species and varieties, excels the collection in the British Museum.

The Rev. Henry C. Reichardt, of Tunis, Africa, owns a most valuable collection of the earliest coins of Palestine and Syria, up to 200 A. D., which includes many rare pieces, such as a unique coin of Agrippa II, with his portrait, and several Turkish *silver paras*, which are now exceedingly scarce. These

were the smallest Turkish coins of silver, and were replaced by copper paras, which are also rare. This collection was made by Mr. Reichardt during thirty years' residence in Damascus.

The mineralogical collection of Mr. W. S. Beekman, of West Medford, Mass., is the largest in that section. It includes some very fine specimens of green prehnite from the old Charlestown locality, first worked by Prof. Dana. It also contains some good specimens of crocidolite.

RARITIES IN VARIOUS COLLECTIONS.

A lady in New York (whose name we withhold) now owns a valuable uncut emerald, set as a pendant, which was once owned by one of the Peruvian Incas. Its history can be traced back to its royal owner.

The original lease of the little farm, Ellisland, which Robert Burns, the famous Scotch poet, tried to work but made a failure of in Scotland, and subsequent release, in his own writing, is in the collection of Mr. C. F. Gunther, of Chicago, Ill.

In the museum of the *Wyoming Historical and Geological Society*, of Wilkes Barre, Pa., are ten earthen pots of the Atlantic coast Indians, mostly found in Pennsylvania. The majority of these are nearly entire, and one specimen is absolutely perfect. Such vessels are extremely rare, and this series is probably the largest in the country.

SALES.

The numismatic collection of the late Rev. George C. Athole was advertised to take place in New York on June 18th, last. The collection consisted of 674 lots, including a choice selection of Saxon, English, Scotch and Irish coins, and a fine series of the coinage of the Isle of Man. Catalogued by Mr. Lyman H. Low.

We have received Mr. W. Elliot Woodward's catalogue of the celebrated Randall

collection of coins, which is to be sold in New York on June 29th and 30th, and July 1st. There are 1749 lots.

The T. Shadford Walker collection of old Wedgwood was disposed of at the auction rooms of Messrs. Christie, Manson & Woods, London, April 22d and 23d. Among the pieces sold, we notice the following: Portrait of Washington, in black and white, £17, 17s.; Prince and Princess of Orange, pink grounds, original ormolu frames, £34, 13s.; statuettes of Voltaire and Rousseau, in basalte, £61; blue and white vase, with muses, by Flaxman, £55; two vases, in black and white, £60; plaque, green ground, a Bacchante, £67, 4s.; oval jardiniere, green ground, £80; portrait of Dr. Erasmus Darwin, £19; large portrait of Boyle, £45; oval frame, with medallions, £110; pair of vases, with three-color grounds, £120, 15s.; blind-man's-buff vase, with marble pedestal, £60, 18s.; Medusa, by Flaxman, £49, 7s. We hear that a few pieces from this collection are likely to find their way to the United States.

The Agassiz Association.

MR. EDITOR: In the May number of THE MUSEUM, Prof. Gentry, in an article entitled "*Rare and Curious Birds' Nests*," speaks of the nest of a humming bird which was made of a soft, woolly substance, resembling a species of fungus. A friend of mine has in his possession a nest of the ruby-throat humming bird, made of the same material as Prof. Gentry describes, covered over with moss, to make it resemble the bark of a tree.

WILLIE E. HUGG,
Sec. Chap. 762, A. A.,
Baltimore, Md.

PATERSON, N. J., June 11th, 1885.

MR. EDITOR: At a special meeting held for the purpose of perfecting the arrangements for our first "Field Meeting," it was decided that we should hold it on May 28th, Prof. Agassiz's birthday. The day having arrived,

the Chapter rode in a large wagon, filled with straw and buffalo robes, kindly loaned for the purpose by a prominent merchant of this city, to Haledon Quarry, a charming place in the suburbs of Paterson. After our arrival the Chapter immediately dispersed the different committees to attend to their work. Committee on specimens were especially successful in finding specimens of sandstone and trap rock, for at this place the trap rock lying on top of the sandstone is plainly seen, as is also shown the result of the glacial period. At the foot of the precipice is a pool where one member collected fresh water crayfish and a turtle, and some other things.

After our refreshments the committee on entertainment was called to order. First was read the first report of the Agassiz Association, followed by Longfellow's poem on Agassiz's fiftieth birthday. Then a résumé of L. Agassiz's life, after which one of the Doctors gave a description of the museum established in one of the Elizabeth Islands, off the coast of Massachusetts, by Agassiz, and also of his having had the pleasure of hearing the great naturalist lecture at the Smithsonian Institution some years ago. That ended our literary exercises. It being nearly dark, we decided to go to our homes, which we did, laden with specimens of all sorts, and especially with bunches of the beautiful dogwood. I think that one and all were very much pleased with our first field-day.

H. C. CROSBY,
Sec'y Chap. 761.

For the past few weeks this Chapter has been making observations on the habits, etc., of the seventeen-year locust, for which Druid Hill Park of this city affords an excellent opportunity. The trees in the Park are literally covered with them, and under some trees the cast-off shells and dead locusts lie in heaps two or three inches deep. The English sparrows kill thousands of them by biting off the head. They do not appear to care about any other part of the locust. The locusts seem to be most numerous in low and damp grounds.—*Report of Chapter 762, Baltimore, Md., June 9th, 1885.*

Editorial.

In the opening article of this number Prof. Cope tells, in his inimitable way, the manner in which he discovered his celebrated *Loxolophodon cornutus*, one of the most singular beasts which roamed the earth thousands of years ago.

A careful examination of the philatelic articles received up to June 1st, has resulted in the awarding of the first prize to Mr. Wm. A. Jefferis, of New York city. The essay is published in this number. The best essays on the subjects of autographs and botany, for which competition closed on July 1st, will be published at an early day.

The Biographical Sketches, of prominent scientists and collectors of the world, accompanied by finely engraved portraits, which are now appearing in THE MUSEUM, constitute an attractive feature of the magazine. It is pleasant to know something definite about the great men whose names are so familiar to us. These interesting biographies, which are written expressly for THE MUSEUM, by persons who are eminently qualified for the work, will be continued indefinitely.

The pages of THE MUSEUM are open to all, for the expression of opinions, the announcement of discoveries and the interchange of views on scientific subjects. We trust that the opportunity thus offered will be embraced by our readers who have anything of interest to communicate. We would particularly call the attention of members of the Agassiz Association and other young naturalists to the list of prizes offered for essays on various subjects. Now is the time to study the habits of the seventeen-year cicada, the only opportunity until the year 1902. We want an essay from every Chapter, giving the results of original observation and describing the habits of this exceedingly interesting insect. Competition on this subject closes on August the 1st.

EXCHANGES AND REVIEWS.

The latest paper from the pen of the eminent anthropologist, the Marquis de Nadaillac, has been received. It is an 8vo. pamphlet of 56 pages, entitled *L'Homme Tertiaire* (Tertiary Man). G. Masson, Editeur, Paris, France.

The *Blätter für Münzfreunde* is a numismatic paper published in Leipzig, Germany. The January number, which is before us, contains a finely executed plate giving reproductions of five (obv. and rev.) large historical and memorial German medals. The publisher is Mr. C. G. Thieme.

The high standard of the *Magazine of American History* is maintained in the June number, which opens with a biographical sketch of "Charles O'Connor," by Chief Justice Charles P. Daly, which will prove of great interest to members of the bar. Davis Brodhead contributes a sketch of "Asa Packard and the Lehigh University," which is abundantly illustrated. J. M. Bulkley reviews some of the "Antiquities in the Western States," including the ancient fort on the Muskingum River, Ohio, and mummies which were found some years ago in the salt caves of Kentucky. "The Cave Myth of the American Indians," by George S. Jones, is an interesting and valuable contribution to anthropological literature. There is also a paper by the editor on "Queen Elizabeth," with a quaint frontispiece portrait, and an article entitled "The Discovery of Lake Superior," by Arthur Harvey. "Reprints," "Minor Topics," "Notes," "Queries," "Replies," "Societies," and "Book Notices," contain the usual amount of interesting matter. Published at 30 Lafayette Place, N.Y.

No. 149 of *The Elzevir Library* contains a delightful paper, by Maurice Thompson, entitled "A Red-Headed Family," in which the habits of the great ivory-billed woodpecker are pleasingly described. John B. Alden, Publisher, 393 Pearl St., New York.

Amongst other interesting matter, the *Key-stone Stamp and Coin Gazette*, for June, contains Frank W. Doughty's fifth paper on "Early American Coins." Mann & Kendig, Publishers, Altoona, Pa.

The American Antiquarian for May opens with Mr. Cyrus Thomas' third paper, entitled "Stone Graves—The Work of Indians." The other contributors are Dr. Daniel G. Brinton, Mr. Andrew E. Douglass, and Mr. Amos W. Butler. There are also the usual eight departments, edited by distinguished scholars. *The Antiquarian* ranks first as an anthropological journal, and has become indispensable to every student of American archæology. Edited by Rev. Stephen D. Peet. Published by F. H. Revell, 150 Madison St., Chicago, Ill.

The subject of the May number of the *Humboldt Library* is "*Fetichism: A contribution to Anthropology and the History of Religion*," by Fritz Schultze, Ph. D.; translated from the German by the Publisher, Mr. J. Fitzgerald, 393 Pearl St., New York. This valuable work deals with all phases of savage idolatry, and shows how many of the current superstitions of civilized peoples originated.

The Magazine of Western History continues to improve with each issue. The June number contains much valuable historical matter, and is embellished with several finely executed steel portraits. Published at 145 St. Clair St., Cleveland, Ohio.

Philatelists should lend their support to the *Philatelic Journal of America*, which is a most excellent monthly, containing a large amount of useful and interesting information, general as well as philatelic. Everett M. Hackett, Publisher, P. O. Box 463, St. Louis, Mo.

The Hoosier Mineralogist and Archæologist, published by Harry F. Thompson, at 17 Butler St., Indianapolis, Ind., is a meritorious little paper, which appears once a month. We wish the young publisher success, and trust that he may soon be enabled to increase the size of his journal.

RICHMOND DIATOMS!!

Twelve superb slides, the result of over ten years' collection and study, giving a completely unique showing of this celebrated deposit, with a rich specimen of the natural earth; postpaid, \$4.00; single specimens, 50 cents; descriptive circulars and catalogue, 4 cents.

C. L. PETICOLAS,
635 Eighth St., North, RICHMOND, VA.

COINS AND MEDALS.

ANCIENT, BYZANTINE, MEDIAEVAL AND MODERN.

An authentic attribution and full description accompanies every coin which I offer at and above 10 cents.

Direct importations from the leading coin marts of Europe.

The most complete and best assorted stock in America.

Invoices of Coins submitted on approval to parties furnishing satisfactory references.

Catalogues of Numismatic works on sale, 15 cents, postpaid.

Coin price list and circulars, upon receipt of postage.

LYMAN H. LOW,
NUMISMATIST,
Season of 1885. 838 Broadway, New York.

THE YOUNG OÖLOGIST.

A Thirty-two Page Monthly Magazine.

DEVOTED TO

BIRDS, THEIR NESTS AND EGGS.

INVALUABLE TO THE YOUNG NATURALIST.

Sample Copy, 8 Cents.

Three Sample Copies, 15 Cents.

Yearly Subscription, 80 Cents.

ADDRESS

THE YOUNG OÖLOGIST,
ALBION, N. Y.

WM. F. FELL & CO., ✽PRINTERS✽

Nos. 1220-24 SANSOM STREET, PHILADELPHIA, PA.

BRIEFS, PAPER BOOKS, BLANKS AND LEGAL PRINTING GENERALLY.

Special attention given to the Printing of

BOOKS, MEDICAL PUBLICATIONS, GENEALOGICAL, NUMISMATIC, PHILATELIC, NATURAL HISTORY AND AMATEUR PAPERS.

ARTISTIC WORK AND FINE MAGAZINE PRINTING A SPECIALTY.

ESTIMATES CHEERFULLY FURNISHED ON APPLICATION.

FIRE-PROOF VAULTS FOR } Printers of "The Museum." { MECHANICAL DETAILS RECEIVE
STORAGE OF PLATES. } OUR PERSONAL SUPERVISION.

The American Antiquarian and Oriental Journal.

AN ILLUSTRATED MAGAZINE, DEVOTED TO ARCHÆOLOGY AND ETHNOLOGY.

Published by F. H. Revell, 150 Madison Street, Chicago, Ill.

SUBSCRIPTION, \$4.00 PER YEAR.

Rev. STEPHEN D. PEET, Editor-in-Chief.

Associate Editors: DR. D. G. BRINTON, PROFS. A. C. MERRIAM, J. AVERY, MESSRS. HENRY PHILLIPS, PH.D., A. S. GATSCHET and REV. J. O. DORSEY.

Correspondence solicited, especially from collectors of Archæological relics.

SEND FIFTY CENTS FOR SAMPLE COPY.

In Answering Advertisements, please mention THE MUSEUM.

ESTABLISHED SIXTEEN YEARS.

L. W. DURBIN,

Foreign Stamp Importer and Publisher of Books on Philately,
Fifth and Library Sts., Philadelphia, Pa.

The largest assortment of Stamps in the country, at the lowest prices. Everything required by Stamp Collectors constantly on hand. Circulars describing new list of marvelously cheap Packets, Albums, etc., free to any address.

Send for them before buying elsewhere.

THE

Hoosier Mineralogist and Archæologist.

A Monthly Journal that should be in the hands of every Collector in the United States. Among its contributors are many of the most noted Scientists of the day. Price per year, 25 cents. Specimen copy, 3 cents.

HARRY F. THOMPSON, Editor and Publisher,

17 Butler Street, Indianapolis, Ind.

FOREIGN STAMPS given for U. S.; catalogue price paid.
(U. S. Stamps for sale.) T. Siddall, Box 734, Phila., Pa.

GENEALOGICAL RECORD

OF

THE ATLEE FAMILY.

The Descendants of Judge Wm. Aug. AtLee and Col. Samuel John AtLee, of Lancaster County, Pa.

By EDWIN ATLEE BARBER, A.M.

An 8vo. book of 130 pages, containing about 2000 names, printed on the best paper and handsomely bound; illustrated with portraits, old buildings, etc. Only 200 copies were printed, for private distribution. A few remaining copies, which were not claimed, are now offered for sale.

PRICE \$2.25.

Address the Editor of THE MUSEUM,

P. O. Box 22, Philadelphia, Pa.

THE MUSEUM TESTIMONIALS.

"The *Museum* is a charming and promising little magazine. I trust—and expect—that it will take and keep an important place, and do much to help young folks in the studies which you and I have so much at heart."—*Joseph Bragge*, Birmingham, England.

"Success should attend your efforts to give to the young a natural history magazine that should be thoroughly popular, and, at the same time, accurate and reliable in its statements. That it supplies a necessity that has long been felt to exist, is unquestioned."—*Thomas G. Gentry*.

"June *Museum* received. If you maintain the present standard of excellence, the magazine will soon become one which every young worker in Science in the land *must* have, if he wishes to keep abreast with his fellows."—*Charles C. Abbott, M.D.*

"It is handsomely printed, and is illustrated."—*Illustrated Christian Weekly*, New York.

"The *Museum* ranks first. . . . That this magazine will undoubtedly fill a long-felt desire by both old as well as young collectors, is plainly seen."—*Hoosier Mineralogist and Archæologist*, Indianapolis, Ind.

"We admire its compact columns, clear print, and short and pointed contributions."—*The Register*, Bordentown, N.J.

"It possesses all the elements of popularity, and should succeed."—*Sunday Mercury*, Philadelphia, Pa.

"A neatly printed and carefully edited monthly magazine for young naturalists and collectors. It contains a number of well written articles on taking topics, which are nicely illustrated."—*The Independent*, Germantown, Pa.

"Its attractive cover and well-filled pages have already won for it a prominent place among the journals of its class."—*Keystone Stamp and Coin Gazette*, Altoona, Pa.

"Its perusal was quite a treat to us, and if it keeps up its present standard of excellence it cannot fail of success."—*The Collector*, Hull, England.

"The second number, just issued, contains an interesting paper entitled: 'The Symbol of the Cross in America,' by Dr. Brinton. Following is a collection of curious scientific facts, of varied character and great value."—*Sunday Press*, Albany, N. Y.

"It is a model in every respect, and we hope that the young scientists of our country will give it the encouragement that it truly deserves."—*Philatelic Journal of America*, St. Louis, Mo.

"The several departments—Natural History, Archæology, Mineralogy, Philately, Numismatics, etc., contain many interesting paragraphs for students and collectors."—*The American*, Philadelphia, Pa.

"In the June *Museum*, which every boy ought to have if his soul is properly devoted to collecting (because a boy is not good for much if he does not collect butterflies, stamps, coins, minerals or something), Dr. Brinton shows how common the symbol of the cross was in primitive Mexican and American adornment. Professor Gentry contributes a short sketch of Professor Edward D. Cope. The promises for future numbers are quite remarkable; but if the magazine only keeps up to the level of interest and value which the first two have shown, it will be a pronounced success in journalism."—*The Press*, Philadelphia, Pa.

In Answering Advertisements, please mention THE MUSEUM.

Mr. J. G. Fotheringham, Bookseller and Publisher, No. 8, Rue des Capucines, PARIS, and No. 59, Rue d'Antibes, CANNES, France, is authorized to receive subscriptions and advertisements for *The Museum*.

SCIENTIFIC AND MEDICAL BOOKS, MINERALS,

And other objects of NATURAL HISTORY.

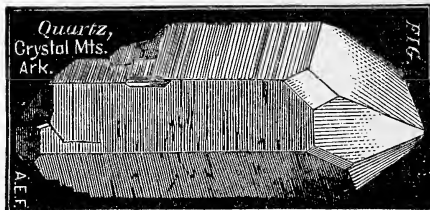
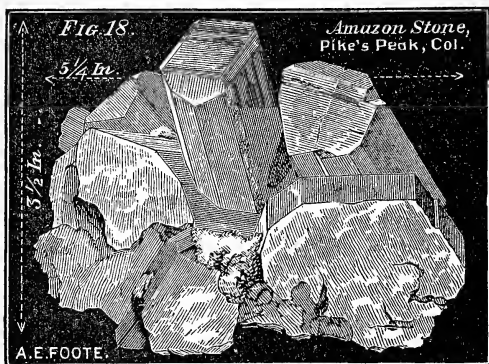
A. E. FOOTE, M. D.,

No. 1223 Belmont Avenue, Philadelphia, Penna.

(Professor of Chemistry and Mineralogy; Fellow of the American Association for the Advancement of Science; Life Member of the Academy of Nat. Sciences, Phila., and American Museum of Nat. History, Central Park, N. Y. City.)

Specimens sent to any part of the world by mail. Specimen copies of the *NATURALIST'S LEISURE HOUR*, of 32 pages, sent free. Subscription 75 cents a year; for club rates and premiums, see each issue.

I received the highest award given to any one at the Centennial Exposition of 1876, and the only award and medal given to any American for "Collection of Minerals."



My Mineralogical Catalogue of 100 pages is sent post-paid on receipt of 15 cents, heavy paper 25 cents, bound in cloth 50 cents, 1/2 sheep 75 cents, 1/2 calf \$1.00, cloth interleaved \$1.00, 1/2 sheep interleaved \$1.25, 1/2 calf interleaved \$1.50, (price-list alone, 16 pp. 3 cents). It is profusely illustrated, and the printer and engraver charged me about \$1,000 before a copy was struck off. By means of this table of species and accompanying tables, most species may be verified. The price-list is an excellent check list, containing the names of all the species, and the more common varieties, arranged alphabetically, and preceded by the species number. The species number indicates the place of any mineral in the table of species, where will usually be found the species name, streak or lustre, cleavage or fracture, hardness, specific gravity, &c., &c., fusibility and crystallization. I have very many species not on the price-list, and some that I had in 1876 are no longer in stock.

COLLECTIONS OF MINERALS for Students, Amateurs, Professors, Physicians, et al.

The collections of 100 illustrate all the principal species and all the grand subdivisions in Dana and other works on Mineralogy; all the principal Ores, &c., &c. The collections are labelled with printed label that can only be removed by soaking. The labels of the \$5.00 and higher priced collections give Dana's species number, the name, locality, and in most cases, the composition of the Mineral; the \$5.00 and higher, are also accompanied by my illustrated Catalogue and table of species. The sizes given are average; some smaller, many larger.

NUMBER OF SPECIMENS.	25 in box.	50 in box.	100 in box.	100	200	300
Crystals and fragments	\$ 50	\$1 00	\$2 00	\$1 00	\$2 00	\$3 00
Student's size, larger	1 50	3 00	6 00	5 00	10 00	25 00
Amateur's size, 2 1/2 in. x 1 1/2				10 00	25 00	50 00
High School or Academy size, 2 1/2 x 3 1/2 in., Shelf Specimens				25 00	50 00	100 00
College size, 3 1/2 x 6 in., Shelf Specimens				50 00	150 00	300 00

I have now over 70 tons, and over \$30,000 worth of Minerals, mostly crystallized, in stock. I can refer to the following Gentlemen and Colleges, all of whom, with thousands of others, have bought of me and most of them have given me especial permission to use their names as reference.

Prof. S. F. Baird, Prof. J. W. Powell, Prof. F. V. Hayden, Prof. R. Pumpelly, Prof. C. V. Riley, Dr. Joseph Leidy, Prof. J. D. and E. S. Dana, T. A. Edison, Prof. G. J. Brush, Prof. J. P. Cooke, E. B. Cox, Agassiz Museum, Harvard University Prof. A. & N. H. Prof. C. S. Sargent, Prof. C. E. Bessey, Iowa State Agr. College, Dr. John S. Billings, Prof. Winchell, Prof. J. F. Newberry, D. S. Jordan, Prof. R. H. Richards, Mrs. Ellen S. Richards, Prof. Maria S. Eaton, Prof. T. Sterry Hunt, C. S. Bement, Prof. A. E. Smith, Beloit College, Prof. G. A. Koenig, Public Library Cincinnati, Cincinnati N. H. Society, M. Buisson, Minister of Instruction, Paris, France, Laurencio Malheiro Lisbon Portugal, Prof. Orton, Prof. Ira Remsen, Gen. A. Gadolin, Imp. School of Mines, St. Petersburg, Russia, Prof. A. E. Nordenschild Royal Museum, Stockholm, Sweden, Dr. Nicolo Moreira Imperial Museum, Rio de Janeiro, Brazil, British Museum, Royal Museum Berlin, Dr. P. E. Defferari Italy, Harvard University, University of California, University of Nebraska, Oregon State College, Yale College, Wisconsin University, Columbia College, Michigan University, Wellesley College, Illinois Industrial University, Massachusetts Institute of Technology, Col. School of Mines, University of Virginia, University of Missouri, Iowa State University, Minnesota State Normal School, McGill College, Amherst College, Chicago University, University of Notre Dame, Princeton College, Johns Hopkins University, University of Georgia, University of Ohio, Brimmer School Boston, and many others in Nevada, Washington Territory, Canada, Maine, Texas, Peru, Chili, England, Brazil, Germany, Austria, etc., etc.

Sells, &c.—I can put up collections of shells at the following low rates: 25 Genera, 25 species, \$1.00; in box, \$1.25. 50 Genera, 100 species, \$5.00; in box, \$6.00. 100 Genera, 300 species, \$25.00; 200 Genera, 1,000 species, \$150.00; 250 Genera, 2,000 species, \$500.00.

Catalogue of 2,500 species of Shells, made for me by George W. Tryon, Jr., who has labelled nearly all my shells, 3 cents, printed on heavy paper with genus label list, 10 cents. I have purchased one or two of the most celebrated collections known, and have now over 2,000 lbs., 3,000 species, and 30,000 specimens of Shells and Corals in stock. Catalogue of Birds, Eggs, Eyes, Skins, etc., etc., 3 cents. Catalogues of various classes of Scientific Books, 32 pp., ea. 3 cts. Medical Books, 80 pp., 10 cts. (Please specify exactly what class of books you wish catalogues of.)

Send for the *Naturalist's Leisure Hour*, giving full particulars. Specimen copy free. You will confer a double favor by handing this to some professor, physician or other person interested in science.

The Museum Premiums.

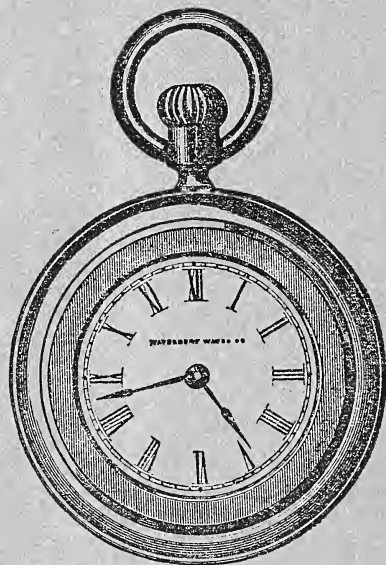
Desiring to bring the Journal to the notice of all who are engaged in collecting, or are interested in the study of Natural History, the publishers of *The Museum* make the following liberal offers :—

1. **For Three Yearly Subscriptions**, one dozen Slides for Microscope, French Educational Objects ; or,
2. Six Cabinet Photographs of Peruvian and Chiriqui Antiquities, Ancient Vases, Idols and Gold and Silver Ornaments ; or,
3. One large Pocket Magnifying Glass, hard rubber case, two lenses (1 and 1¼ inch diameter).
4. **For Five Subscriptions**, a collection of 50 different species of foreign and domestic Mosses, correctly named.
5. **For Six Subscriptions**, a collection of 100 specimens of Minerals, all different, correctly named ; or,
6. A copy of the Rev. J. G. Wood's "Common Objects of the Microscope" (containing 400 engravings, in colors) and a *Boy's Compound Microscope*, packed in a polished walnut case.
7. **For Fifteen Subscriptions**, *The Museum* for one year ; a fine collection of 100 pressed and correctly named foreign and American Mosses ; a copy of Wood's book on the Microscope and a *Universal Household Microscope*, packed in a polished mahogany case.
8. **For One Hundred Subscriptions**, a *Histological Binocular Microscope*, 14 inches in height, with necessary accessories, in an upright mahogany case. This is a splendid \$75.00 instrument.
9. **For Four Subscriptions**, 12 fine Indian Spear and Arrow Points.
10. **For Fifteen Subscriptions**, a splendid collection of 100 beautiful butterflies, all different, carefully prepared and mounted, many of them rare.
11. **For Twenty Subscriptions**, a collection of 25 fine bird skins, all different, including a number of rare species.
12. **For Fifty Subscriptions**, a choice collection of genuine Indian relics,—all unusually fine specimens,—worth over \$35.00, including a stone pipe, a fine piece of ancient pottery (entire vessel), ceremonial badge, perforated tablets, large and perfect spear heads and arrow points of rare forms, fragments of painted and corrugated Pueblo pottery, from ancient ruins in Southern Utah, shell beads, flint awls, haliotis-shell pendants, bone perforators, etc., from ancient graves in California. The first to avail themselves of this offer will secure the best specimens, although all of the sets are very desirable.

(OVER.)

How any Boy or Girl may become the Owner of a Good Watch!

"The Waterbury."



The publishers of *The Museum* have made arrangements with the manufacturers of the celebrated **Waterbury Watches**, to procure them in large numbers, at the lowest rates, and we are therefore enabled to make the following surprising offer:—

13. For Six Subscriptions we will send one of these watches, securely packed and charges prepaid, to any address in the United States. The accompanying engraving represents the watch as it is.

There is not a bright boy or girl in the land who cannot procure, *in one day*, at least six subscribers for *The Museum*. Send to us for a specimen copy to show your friends and you will be surprised to find how easy it will be to procure the necessary number of subscribers and thus secure an excellent standard timepiece, free of cost.

Premiums.

Transportation on premiums 1, 2, 3, 4, 9, 11 and 13 will be prepaid. Expressage on Premiums 5, 6, 7, 8, 10 and 12 must be at the expense of addressees. In specifying premiums desired, please refer to the numbers. Having the addresses, and in most cases, the price lists, of 2000 dealers in Collectors' supplies, in all parts of the world, we enjoy unusual facilities for procuring collections of objects of all classes, at the lowest rates. We shall take pleasure in furnishing an estimate of the number of subscriptions required to obtain anything desired by any collector. It should be understood, however, that we are not dealers, and in no case offer objects for sale.

Young collectors should set to work at once to secure, without expense, some of the above mentioned prizes. Subscriptions should commence as early as possible, in order that no numbers of the Journal may be lost.

Please send remittances by money order or registered letter.

Address all communications to

The Editor of THE MUSEUM,

P. O. Box 22,

PHILADELPHIA, PA.



WM. F. KELL & CO., PRINTERS,
1220 Sansom Street, PHILADELPHIA, PA.

Entered at the Philadelphia Post Office as Second-class Matter.
SUBSCRIPTION PRICE, \$1.50 PER YEAR. SINGLE COPY, 15 CENTS.

THE MUSEUM.

An Illustrated Journal, under the Editorial Management of Edwin AtLee Barber, A.M., published, on the first of every month, in the interests of Young Naturalists and Collectors of all Classes.

Amongst the Contributors to the early numbers will be

DR. DANIEL G. BRINTON,
PROF. EDWARD D. COPE,
MR. HENRY PHILLIPS, Jr.,
PROF. THOMAS G. GENTRY,
PROF. J. T. ROTHROCK,
DR. JOSEPH LEIDY,
REV. W. M. BEAUCHAMP,
MR. ANDREW E. DOUGLASS,

PROF. THOMAS C. PORTER,
DR. CHAS. C. ABBOTT,
MR. HERMAN STRECKER,
MR. ERNEST INGERSOLL,
MR. F. RATHBONE, London, Eng.,
PROF. C. F. HOLDER,
MR. WM. H. HOLMES,
MR. EDWARD POTTS,

The MARQUIS DE NADAILLAC, of Paris, France,
CAPT. R. C. TEMPLE, of India,

and many other prominent Scientists and Collectors.

The specific object of the Publishers of *The Museum* is to supply a popular demand of our Youth for a periodical of elevated tone, which shall be, at once, a recognized medium of intercommunication and an instructor in popular science.

Subscription Price, \$1.50 per Year.

To Foreign Countries, \$1.60.

Single Copy, 15 Cents.

ADVERTISING RATES MADE KNOWN ON APPLICATION.

PUBLICATION OFFICE, 1220 Sansom Street, Philadelphia Pa.

PRESS NOTICES.

"*The Museum* contains much of interest, and is well filling its object of being an instructor and a means of intercommunication among young scientists."—*Illustrated Christian Weekly*, New York.

"*The Museum* is a splendid publication. It contains many first-class articles, and the stamp department is carefully conducted."—*Foreign Stamp Collectors' News*, Hull, England.

"It is one of the neatest and best papers of the kind we have had the pleasure of reading."—*Stamp World*, Cincinnati, Ohio.

"Collectors of all kinds of curiosities will find

much to interest them in this little monthly."—*St. Paul and Minneapolis Pioneer Press*.

"It is worthy of the support of any collector."—*The American Osprey*, Plymouth, Ct.

"It is illustrated, and contains a large amount of interesting reading for collectors and young naturalists."—*Boys and Girls*, Flushing, Mich.

"Fulfills the expectations awakened by the pioneer copy noted a few weeks ago. For young collectors and naturalists, we know of no better journal than *The Museum*."—*Bucks County Intelligencer*, Doylestown, Pa.

Announcement!

Forthcoming Numbers of the Museum

Will contain, among other attractions, the following illustrated papers :—

IGUANODONS FOUND IN BELGIUM, by the **Marquis de Nadaillac**.

CURIOUS MANUFACTURES OF THE HAIDAH INDIANS, by **Mr. James Deans**,
of Victoria, B. C.

A SHELL MOUND ON THE FLORIDA COAST, by **Mr. Andrew E. Douglass**.

A series of papers on **BUTTERFLIES AND MOTHS**, by **Mr. Herman Strecker**.

ANTIQUE JAPANESE TOBACCO PIPES, by **Edwin A. Barber**.

ON THE COLLECTION OF OLD WEDGWOOD CHINA, by **Mr. Fred. Rathbone**,
of London, England, the best authority on this noted ware.

BOTANY, by **Prof. T. C. Porter**, of Lafayette College, Easton, Pa.

THE STORY OF A BROKEN STONE, by **Dr. Charles C. Abbott**, of Trenton, N. J.

EUROPEAN ARCHÆOLOGY, by the **Marquis de Nadaillac**, of Paris, France, the
eminent Anthropologist.

COINS OF INDIA, by **Captain R. C. Temple**, Cantonment Magistrate at Ambala,
British India.


MOSESSES AND HOW TO COLLECT THEM, with illustrations of curious species,
by **Edwin A. Barber**.

CRYPTOGAMIC BOTANY, by **Prof. J. T. Rothrock**, of the University of Penn'a.

CURIOSITIES IN COINS, by **Mr. Henry Phillips, Jr.**, the eminent Numismatist and
Antiquary.

Other illustrated papers, by noted scientists, are also in hand, or promised, on **Indian
Pipes, Autographs, Pottery of American Races, Sea Weed, Coins, Stamps, Birds'
Eggs, Minerals and Sponges**.

SPECIAL OFFER.

 To any boy or girl who will send us the names of four new subscribers and \$6.00, we will send a copy of **THE MUSEUM** free, for one year.

CLUB RATES:

FIVE yearly subscriptions for \$ 6.00, or \$1.20 each.

TEN yearly subscriptions for 11.00, or 1.10 each.

TWENTY yearly subscriptions for 20.00, or 1.00 each.

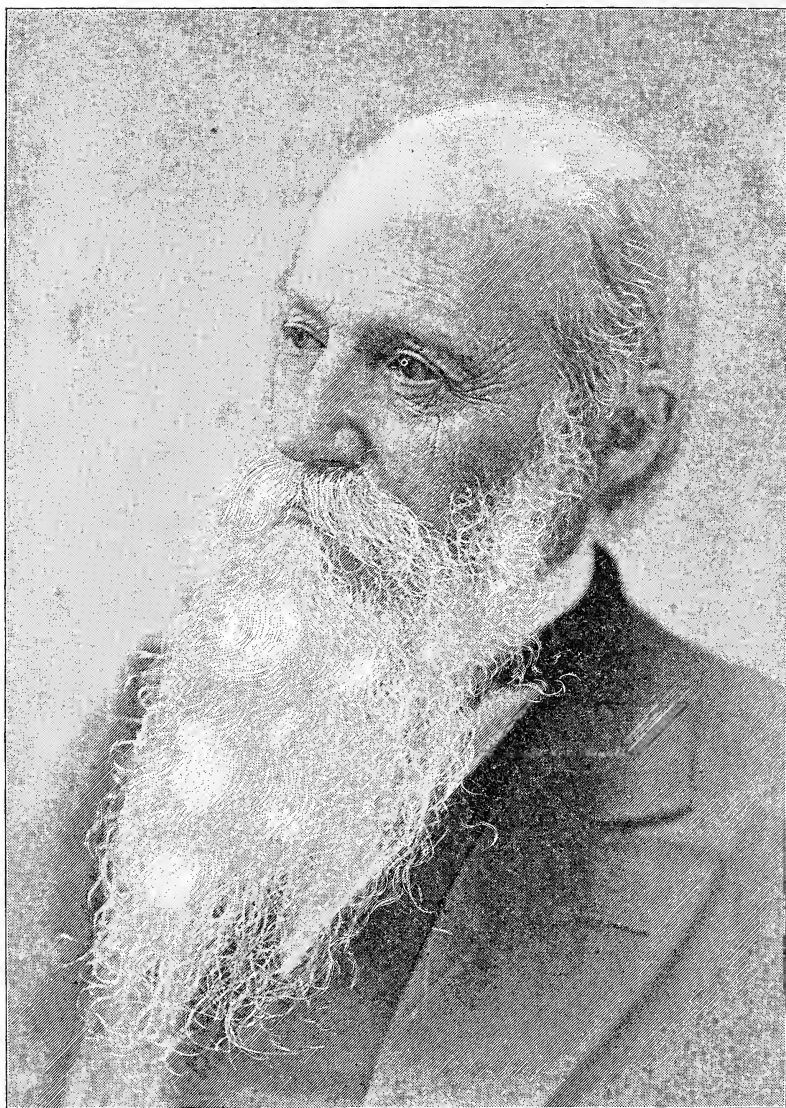
A limited number of specimen copies of **THE MUSEUM** will be sent out this month to non-subscribers who are known to be interested in one or more of the subjects to which the journal is devoted. If each person who receives a copy will carefully examine its contents, or kindly hand it to a collector or naturalist, the Editor will esteem it an especial favor. It is believed that the journal will commend itself to all who may have the opportunity of glancing over its pages. Each number contains valuable information which cannot be found in any other publication. The scope of **THE MUSEUM** is unique. Collectors, Public Museums and Scientific Societies will find **THE MUSEUM** invaluable in procuring useful information, which cannot be obtained from any other source, relating to collectors and collections in all parts of the world. We already have a large amount of unpublished material on hand, and are receiving, daily, valuable additions, which will be published as rapidly as our space will permit.

Editors will oblige us by forwarding copies of their publications containing notices or reviews of **THE MUSEUM**.

A Trial Subscription.

TO ANY ONE WHO WILL SEND US 35 CENTS, to cover the bare cost of printing, WE WILL SEND FOUR CONSECUTIVE NUMBERS OF **THE MUSEUM**. This very liberal offer is made for the purpose of bringing the magazine to the attention of those who have not had the opportunity of judging of its merits. We believe that the majority of persons who are thus enabled to examine several numbers will the more readily understand its scope, and that they will recognize its value and BECOME PERMANENT SUBSCRIBERS. The early issues are already nearly exhausted.





S. S. Haldeman

THE MUSEUM.

VOL. I.

PHILADELPHIA, AUGUST, 1885.

No. 4.

PLANARIANS.

BY PROF. JOSEPH LEIDY.

In the extensive class of vermes or worms, is an interesting group constituting the family of Planarians. Essentially aquatic, they are mostly marine, though many live in fresh water, and others are terrestrial. They resemble leeches in shape, and are often mistaken for such, though they possess an entirely different structure. They are of soft consistence, easily decomposed, and are slimy or covered with mucus. Ordinarily they creep or glide about by a broad, sole-like surface, extending the entire length of the body, in the manner of snails, or they may swim on the surface of water, upside down, likewise in the manner of the latter. In motion the Planarians may elongate and shorten the body, like leeches, but they have no distinctly annulated structure, as in the latter. The microscope exhibits their surface clothed with vibrating cilia; and imbedded in the skin, cells, containing minute rods, which are shot forth as threads when the animal is irritated. These cells, apparently, in their nature, accord with the netting cells of the hydra and other cœlenterates. Though the Planarians conform to the usual bilateral symmetry of shape of the body in most classes of animals, their digestive apparatus seems rather to approximate the condition of that of cœlenterates. The mouth is situated at or behind the centre of the under surface of the body and communicates with an interior cavity directed forward. The cavity contains a proboscis, commonly a simple, free, cylindrical tube, which extends forward and joins the stomach, just as the proboscis of a medusa suspended within its bell opens into the stomach at the bottom of the latter. In the act of feeding the proboscis is protruded its entire length from the mouth and projected in all directions. The stomach is of remarkable character and is spread throughout the solid structure of the body in three main branches, of which one is directed forward to the head, and the others, on each side, backward to the tail. As in the medusæ it does not occupy a distinct body cavity or cœlum, and has no other outlet than the proboscis. The main branches of the stomach divide into numerous lateral pouches, giving the entire organ a sort of vascular arrangement, distinguished as dendritic, or tree-like. The intervals of the stomach are partially occupied by a bisexual generative apparatus, which opens externally behind the position of the mouth. The anterior extremity of the body of

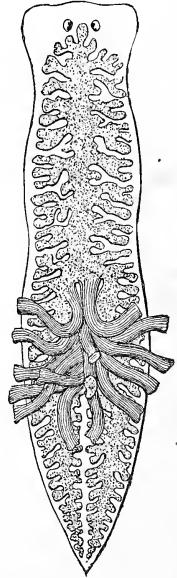
Planarians, distinguished as the head, is commonly furnished with a pair of eyes, though some genera possess a greater number.

Of our fresh water Planarians, the most common is the *Planaria maculata*. It ranges from two to seven lines in length; ordinarily, in motion, about half an inch by a line in width. The upper convex surface is variably brown to black, uniform or with indistinct scattered spots of a lighter hue. The under surface is of uniform lighter hue and more translucent. The color is more or less modified by the stomach and its contents shining through, variably distinct and usually brown, but sometimes with a greenish or reddish tint. At rest the animal is shorter and wider and appears as an oval or ovoid disk. In motion, when the body is most extended, it is lanceolate, acute behind, and with the head triangular and varying to diamond shape, according to the degree of expansion. The front and lateral angles of the head are variably prominent, obtuse or acute, and are frequently erected in the movements of the animal, as is also the case with the entire head. The eyes, at the base of the head, near together, appear as a pair of black, cup-like spots at the bottom of an oval, colorless space. The mouth is behind the centre of the ventral surface; the proboscis is a simple cylindrical tube; and the stomach presents the usual dendritic arrangement. This *Planaria* is found in almost every brook, pond, creek and river. It appears to be nocturnal, and in the daytime lies concealed on the under side of stones, often in considerable numbers together, associated with a variety of other aquatic animals. In motion in a dish of water it glides along the bottom, like a snail, often ascending at the sides and turning upside down swims on the surface, likewise in the manner of fresh-water snails, like *Physa* and *Limnæa*. It is abundant under stones in the Delaware and Schuylkill rivers, in association with little leeches of the genus *Clepsine*, the brown *Hydra*, etc.

Another Planarian, less common than the former, though also frequent in similar positions, is the *Procotyla fluviatilis*. It is milk-white, though occasionally marked by the brownish color of the dendritic stomach. It has nearly the size, shape and structure of *Planaria maculata*. The head is rather abruptly truncated, with the lateral angles variably prominent and rounded. The front is provided with a median cup-shaped sucker, capable of protrusion and expansion and of retraction. The eyes usually consist of a single pair at the centre of the head, but the number is not unfrequently variable. I have observed from one to four pairs, forming two longitudinal rows. Occasionally the number varies on the two sides of the head. In one instance I saw an individual with one eye on the right and three eyes on the left, and in another instance two eyes on one side and five eyes on the other. Each eye is composed of a black cup enclosing a transparent vitreous body, and distinctly connected behind with a nerve. In some individuals I have observed the posterior branches of the stomach variously anastomose with each other. In movement the animal uses its frontal sucker to adhere to surfaces, just as the leech does by its caudal sucker. This species I have found abundantly in the Delaware and Schuylkill rivers, and especially in the ditches of the meadows communicating with these, below the city of Philadelphia. It is often found attached to the submerged stems of plants;

frequently in the leaf sheaths of rushes. I have also found the species in ponds and rivulets of other parts of Pennsylvania and New Jersey, and near Newport, Rhode Island. In one instance, among several hundred specimens, collected in a ditch below Philadelphia, ranging from three to five lines in length, I observed a single individual twice the size of the others. When placed in weak alcohol it protruded the proboscis, which assumed a regular bell shape.

A Planaria, perhaps not uncommon in some localities of our country, though I have rarely met with it, is the *Phagocata gracilis*, which is not only one of the most remarkable of the family, but one of the most singular animals I have had the opportunity of observing. So far as my information goes I believe, with the present exception, there is no known individual or simple animal which has more than one throat or passage of communication with the stomach. My attention was first called to the singular creature by the late Prof S. S. Haldeman, while I was a guest in his hospitable home at Chickis, on the Susquehanna river, in 1847. He had previously described it, in 1840, with the name of *Planaria gracilis*. In front of the house is a beautiful spring of water, which has its source in the neighboring cliff of Potsdam sandstone, and runs in a clear stream over a sandy bottom into the Susquehanna. Creeping on the bottom of the spring, crossing and recrossing in restless activity, and sometimes ascending at the sides and floating bottom upward, like fresh-water snails, all day long, were numerous specimens of the Planaria. In shape, size and color it so nearly resembles *Planaria maculata* that I have suspected it may be another stage of the same. The head, however, is less diamond shaped and with more obtuse front and lateral angles. The coloring is more uniformly brownish black. The eyes are like those of *P. maculata*, and the stomach is alike in its dendritic arrangement. As represented in the accompanying figure, magnified, the animal has numerous probosces. These have the same form as that of the other species, but range in number from three to a couple of dozen, apparently according to age and size of the animal. One is attached to the commencement of the anterior branch of the stomach, as usual in other Planarias, while the others are attached along the anterior half of the inner side of the postero-lateral branches of the stomach. Observed in the oral cavity, within the animal, subjected to slight compression under the microscope, the probosces are seen to be closely crowded, and as they move they mutually displace one another. In the act of feeding the animal contracts and all the probosces protrude from the expanded mouth and wriggle in all directions. Each and all together swallow food, which is probably mingled decomposing animal and vegetal



matter. In experiment the creature was observed to feed with avidity on portions of a crushed earth worm. The numerous probosces in their position and movements reminded me of the young of Clepsine, attached to the parent and moving about in

the same manner. Phagocata resembles a compound coelenterate, its probosces resembling so many polyps communicating with a common alimentary canal. When the probosces are detached they move about actively, like independent beings. They elongate and shorten, advance and recede, twist about like a divided earth worm, expand the mouth and swallow food and pass the latter and discharge it at the opposite extremity. I have suspected that, except the anterior one, the probosces are a progeny of young, but this needs investigation to determine. Besides the original locality in which I saw Phagocata, I have since found an occasional specimen in springs in the vicinity of Philadelphia and Newport. It is said also to have been found in Massachusetts.

Land Planarians, very few, compared with aquatic species, are found in moist places, in temperate and tropical countries. Of upward of sixty species only one has been discovered in North America, the *Rhynchodemus sylvaticus*. In movement it is about half an inch in length, linear in shape, widest at the posterior fourth and gradually tapering to the head end, which is rounded or subacute, while the tail end is obtuse or variably acute. It is iron gray, with a variable darker longitudinal dorsal stripe on each side. The eyes are two, lateral, and appear slightly prominent. The mouth is behind the centre of the body, and the proboscis is of the usual form. The stomach also has the usual three-parted and dendritic arrangement. In movement the head curves upward, and in a state of rest is often recurved and rests on the back, with the end turned upward. I first detected this species under some flower boxes and pots in the little garden attached to my house, in Philadelphia. I afterwards sought and found it, on several occasions, in the woods of the vicinity of the city, on the Schuylkill. I subsequently found it in the Alleghanies, and in one instance collected a dozen individuals, early in the morning, on a paling fence, at Newport, Rhode Island. The animal appears to be carnivorous, as I found it to feed greedily on crushed house-flies.

In the southwestern corner of Colorado are many thousands of ruined buildings which are supposed to have been erected hundreds of years ago, by an ancient people who have long since disappeared. In the vicinity of these old houses, tons of broken pottery are strewn over the ground. The ware is of superior quality, some of it colored a bright red, some white, with black designs painted on it. A few years ago a party belonging to the U. S. Geological Survey, in passing through a cañon where these ruins abound, came across traces of a modern Indian encampment, in which the remains of a play-house of some Indian papposes were found. A rough table had been made by laying a large, flat stone across two supporting rocks; on this were a dozen or so large pieces of this ancient pottery and three beautiful stone arrow-heads, which had been utilized as a tea-set, and placed as though the little Indians had been "playing tea-party," just as their white brothers and sisters are in the habit of doing. The specimens of pottery were the finest found in that section.

For THE MUSEUM.

THE LATE PROFESSOR S. S. HALDEMAN.

BY EDWIN A. BARBER.

Two miles above Columbia, Pa., on the eastern bank of the beautiful Susquehanna, towers a picturesque mass of rock, known as Chickis, named from the creek which flows into the broad stream at this point, called by the Indians Chickiswalunga (the place where the cray-fish gather). At the base of this natural fortress, and facing the river, stands a comfortable, roomy house, with broad and ample portico, supported by massive pillars, which, for more than forty-five years, was the home of Professor Haldeman, and the resort of the foremost scientific men of the age.

When the unlooked-for death of Professor Haldeman was announced, five years ago, a deep gloom overspread the entire scientific world. Many able memoirs and sketches, reviewing his inestimable services to science, appeared shortly afterwards; but those who knew him only as a scientist were acquainted with but one side of his character. In his domestic life he was a man of the strictest purity, sympathetic and sensitive in nature, a model husband and father; as a host his charming hospitality was proverbial; as a collector he was indefatigable, and as a friend he was most loyal. It is in these aspects that we propose to view his character in this brief sketch.

Samuel Stehman Haldeman was born at Locust Grove, Lancaster Co., Pa., on August 12th, 1812. In his early boyhood he evinced a remarkable love for the study of natural history and the languages. He spent much of his time in wading the Susquehanna for cray-fish and eels, in hunting Indian relics and collecting minerals, shells and insects. His little museum, in the loft of his father's carriage house, contained stuffed birds and animals, which a traveling Methodist preacher taught him how to prepare. It is related of him that when a mere child at school he discovered that another lad could spell words in German, and, determining at once not to be outdone, he arranged to study the language with his classmate, the elements of which he soon succeeded in mastering. While attending this school he gained the confidence of his teacher to such an extent that he was appointed monitor of his class. His parents were, at that time, zealous Methodists, and built a chapel or meeting-house at Bainbridge, which they donated to that denomination. It was their intention to educate their eldest son, Samuel, for the ministry in that Church, and with this in view they afterwards sent him to Carlisle College. But he did not remain here to graduate, the restraints of a college course being irksome to his ambitious nature. He preferred to direct his own studies and to extend them into entirely new fields.

Mr. S. S. Rathvon, now of Lancaster, Pa., was for nearly half a century a collaborator in science, and recalls many pleasing anecdotes of this remarkable man. He relates an amusing circumstance which occurred when the subject of our sketch was twenty years of age. A dramatic association was organized at Marietta, in October, 1832; both young men, who were about the same age, became members. The first performance took place on Christmas eve. The "Haldeman boys," Samuel,

Edwin and Henry, volunteered their services for the orchestra, the former being a good singer and clever performer on the flute, violin and piano. His conception of character (especially his costume and representation of the "Spanish Hero") was far above that of the ordinary country play actor. He was practically the critic of the association, and did much to improve it. On one occasion he and Mr. Rathvon were to sing, "O, Cruel were my Parents," as an interlude between the plays, he representing "Billy," and the latter "singing at his elbow through all the streets in town." Through the impatience of one or two who had parts in the "after-piece," the musical duet was "cut out" and a general row took place in the green-room. Every one appeared to be angry, from the president (the late Judge Libhart) down to the "supes," but there stood young Haldeman, with fiddle in hand, a flesh-colored patch over one eye and a leg fixed at the knee in a crotch, surveying the scene with the utmost blandness, and now and then indulging in one of his most characteristic chuckles, regarding the whole as a magnificent piece of comedy, and thinking that if the audience could witness it they would willingly pay an extra shilling. His self-possession and witticisms proved "oil on the troubled waters," and a calm soon followed, succeeded by unrestrained hilarity.

Owing to his intellectual progressiveness, this association soon "outlived his liking," and, mainly through his efforts, was transformed into a lyceum. A collection of minerals, fossils, etc., was gathered together and a library formed. Before this society the Professor subsequently delivered lectures on various subjects, and through his influence and example the study of mineralogy became popular with the young men of the town.

In 1835 he married Miss Mary Hough, of Bainbridge, Pa., a most estimable lady, and it was much through her domestic administration of the household that he found so much time to devote to scientific pursuits.

"During the summer of 1841," writes Mr. Rathvon, "no matter how or why, I had made a small collection of insects that I captured on the premises which I then occupied, including a large, horned, black beetle, which I obtained elsewhere. These, without knowing the names of any of them, I had impaled, with the beetle in the centre, and hung up in my place of business. A short time afterward Prof. Haldeman came in, as he always did when he came to Marietta, and his quick eye immediately detected them. With much animation he remarked, 'Ah, I see you have a fine specimen of *Xyloryctes satyrus*, and that's *Harpalus pennsylvanicus*, and that's *Macroductylus subspinosus*,' etc., etc., names that covered me with confusion, and I almost wished I had let the animals alone. But he encouraged me to proceed, and invited me down to see the Hentz collection of *Coleoptera*, which he had previously received from Alabama. He presented me with a pack or two of insect pins, gave me instructions in collecting, exhibited and explained his various implements, made suggestions in regard to a cabinet, and ended by loading me down with elementary and other books, some of which were loaned and others unconditionally donated. I never gave him a specimen that he did not return tenfold.

"Whatever others may have thought of his various acquirements, he had no inflated or egotistical opinion of himself. Once, when one ventured to say that he was 'a very remarkable man,' he denied the 'soft impeachment,' replying that, considering the advantages he had had, compared with others, he did not know half as much as he ought to have known; continuing, 'there is Blank, without education, with a large family to support by his daily toil, and with no means but the results of that toil; that *he* should have accomplished what he has is remarkable.'"

Prof. Haldeman devoted the greater portion of his life to the study of languages, and he finally became one of the most eminent linguists of his time. Not only was he perfectly familiar with all of the languages now spoken throughout the civilized world, but he was also well versed in the dead and Oriental tongues, and in a number of American Indian dialects. His remarkably flexible organs of speech enabled him to articulate the peculiar clicking and guttural sounds of the latter, which are usually so difficult for a white man to acquire. At a fancy ball in Paris he talked, through a mask, to a savant in all the principal European languages. His companion tried in vain to guess his nationality, so the story goes, and finally said, jokingly, that he must be a Russian, whereupon the Professor quoted a verse in Russ so correctly that the Russian gentleman could hardly be convinced afterwards that he had been talking to an American. In 1851 he was elected Professor of Natural History in the University of Pennsylvania. In 1855 he accepted a professorship in Delaware College, and afterwards filled the chair of Comparative Philology in the first-named institution. He was also appointed to other professorships in this country and in Europe, and assisted in editing a number of scientific publications, besides holding other positions of honor and distinction. His principal labors were in mineralogy, geology, conchology, ornithology, entomology and anthropology. He used to say that he seldom devoted more than ten years to one branch of natural history. After he had thoroughly mastered that, he would lay it aside to take up a new one. In this systematic manner he accomplished, perhaps, more than any other living naturalist. His knowledge covered a multitude of subjects, and he was a recognized authority in each one of them.

While yet a young man he achieved considerable fame by winning the prize, offered by Sir William Trevelyan, for the best essay on reform in the spelling of English, over a score of European philologists. He was ever exploring out-of-the-way and unthought-of subjects. His originality was apparently limitless.

In a letter to a friend, dated April 15th, 1876, Prof. Haldeman relates how he came to extend his investigations to archæological matters. He writes, "My line of studies is beads (ancient and modern) and materials used for beads and necklaces, a subject to which you allude in your contribution to Hayden's Report. Last year I searched curiosity shops in Europe and made notes in the museums, while here, I have specimens from Indian graves. More recently, in searching for beads in a rock recess near my house, I came upon a pre-historic residence, without beads or any European object, but with numerous fragments of clay pottery and stone implements, including grain pounders, arrows, flakes, hatchets, pebbles broken for arrows,

etc., so that my interest has extended to the entire subject, but mainly to beads, arrows and pottery."

In another letter, dated several years later, he describes, in his characteristic manner, a relic-hunting tour, in these words: "A few days ago I took a drive down the Susquehanna, to the borough of Washington; saw two boys wading for cray-fish; asked 'why not hunting arrow-heads?' After some talk, one of them told me of various boys and girls who had beads and other relics, and offered to go with me, first to a distant barn to see a stone axe the owner wouldn't sell. Saw *two* men, each with an axe—secured both. I was then guided through the straggling town, the boy now and then calling out, 'Jim,' (etc.) 'here's a man wants to buy arrow-heads,' (etc.) I penetrated alleys and entered humble houses; then my small change ran short; was told I might replenish at the front street tavern, where my guide told all interested to call."

The writer well remembers his first visit to Chickis. Arriving in the evening, he found the Professor in the midst of unpacking several boxes of Indian manufactures, which had just been received from his daughter, Madam Figyelmessy, in Demarara, British Guiana. (He was devotedly attached to his children, and his regret at parting with his daughter, after one of her visits home, was always philosophically tempered by the prospect of receiving other good things from South America.) As each object was removed from its packing, the Professor's enthusiasm broke forth in expressions of undisguised delight. After tea, as we all sat talking in the parlor, our host, holding in each hand an Indian musical instrument, remarked, in his dry, humorous way, "My wife seems to think that I am in my dotage when I am so pleased with my rattles and my whistles; but then, we philosophers must not mind such little things. Suppose we leave the ladies with their jimcracks, and go up to the library," which we accordingly did. The study was situated in the top of the house. On the walls hung many curious weapons and Indian accoutrements. Here was a quiver filled with poisoned arrows; there, a Comanche shield and scalp, from Texas; spread over the tables and shelves, on the floor and in drawers, were innumerable relics from all parts of the globe. A large case of drawers contained his unique and magnificent collection of beads, of all ages and nations, and valuable books of reference were crammed into cases and on shelves, and piled up on his desk and around the walls of the room. It was a veritable curiosity shop, and the Professor never for a moment wearied in exhibiting his treasures and in pointing out their striking peculiarities. Now he would describe his new method of restoring broken arrow-heads with a preparation of wax, colored so naturally as to defy detection; now he would exhibit some improved labels for mounting them; and finally the subject turned to philology and the popular misuse of terms, such as Smithsonian "Institute" instead of "Institution;" the use of the word "privilege" as applied to more than one person, "as if," the Professor would say, "two or more persons could share the same privilege, the word itself meaning that which can only be enjoyed by one." Then we repaired to the broad grounds which surrounded the house, and examined the immense boulder

of rock on the premises, which the Indians had hollowed out for a mortar; and finally we finished our evening's explorations by examining the rock retreat, facing the railroad, from which so many Indian remains had been recently taken.

Professor Haldeman was never at a loss for a good story to illustrate a point. He was witty, much given to anecdote and an enjoyer of jest, and his humorous stories were often emitted in such rapid succession that they could not be recalled by his hearers. Frequently, when conversing with a friend on the street, he would gather an appreciative crowd around him. On one occasion the writer occupied the same seat in the car with him from Philadelphia to Chickis, during which time he entertained all of the passengers within hearing by his wonderful flow of anecdote. At the end of the journey a gentleman who sat near was heard to remark, "That man is the most fascinating talker I ever listened to." A county superintendent of schools once said to me, "I never knew a more versatile, or better informed man than Professor Haldeman. I remember once we wrote to him, asking him to deliver a lecture for us, and received an answer requesting us to select our subject and he would be ready."

One of his most noteworthy characteristics was a conscientious particularity in giving full credit, in his writings, even in the most unimportant particulars, wherever credit was due. He never claimed credit for the discoveries of others. He wrote to a friend who submitted to him some manuscript, "Your article is so good that I wish it to be better. I will give you some hints, for which I do not wish to be quoted, as they are facts which pass from one to another."

To young students he was ever ready to impart information and render assistance. As rapidly as his collections accumulated he was in the habit of culling out such objects as had served their purpose in his investigations, and sending them to public museums. "You are aware," he often said, "that I am collecting for a public purpose."

Prof. Haldeman was elected to membership in some forty scientific societies, in all parts of the world. His published writings included about one hundred and fifty papers and books. He was beloved by all who made his acquaintance. "I never knew," remarks Mr. Rathvon, "a man so free, so open, so generous as Haldeman in his efforts to help others who manifested any disposition to help themselves."

He attended the meeting of the Association for the Advancement of Science, in Boston, shortly before his death. In a letter, dated September 4th, 1880 (one of the last he ever penned), he says "I have returned from Boston, sick and exhausted; can't stand travel and excitement." From this indisposition he never recovered. Six days afterwards, on the 10th of September, 1880, he passed away from the scenes of his earthly labors. Thus peacefully ended a useful life, full of years and honors.

It seems particularly fitting that the beautiful monument which marks the last resting place of the late Dr. Haldeman, at Marietta, should have been designed and carved by one of his co-workers in science, Mr. Herman Strecker, of Reading, Pa. The excellent portrait which forms the frontispiece to this number has been kindly presented by Mrs. Sara Haldeman Haly, of Harrisburg, Pa.

FOR THE MUSEUM.

CURIOUS BUTTERFLIES AND MOTHS.

BY HERMAN STRECKER.

To any of nature's marvellous works the term 'curious' can only be applied in a relative sense, as everything connected therewith furnishes food for unbounded wonderment and admiration. Of the thousands of known kinds, or species, of butterflies and moths, there is on each a pattern, or design of ornamentation, which distinguishes it from all the others, and yet each kind retains its distinctive characteristics from generation to generation, unless modified by climatic or local causes. It is certainly far more a matter of wonderment that all the leaves on a tree should be alike, than if they were all, or in part, different from each other. Hence it is only the rarity of the various freaks, or abnormal forms, that makes them seem so curious in our eyes. Volumes could be written descriptive of nature's sports; some are stable, and reproduce their kind from season to season, as in locally isolated varieties; others are what might be termed accidental freaks, and occur but once, or repeat themselves rarely, re-occurring only after long intervals. Some are the result of climatic and other influences. In the dry, salty, desert regions of Arizona and Utah, butterflies, whose nearest kin in other localities are of dark colors, are white, or partially so. Some kinds that have tails to the hind wings, ordinarily, occur in certain sections with those appendages very short, or entirely absent. But there are such legions of curiosities in the field we are now traversing that, with far more space at our command than the limits of this article will allow, not a tithe of them could be hinted at even; hence, but a few can be at present mentioned, and of those I will choose such as are normal in themselves, though curious, and, to the uninitiated, quite out of the general order



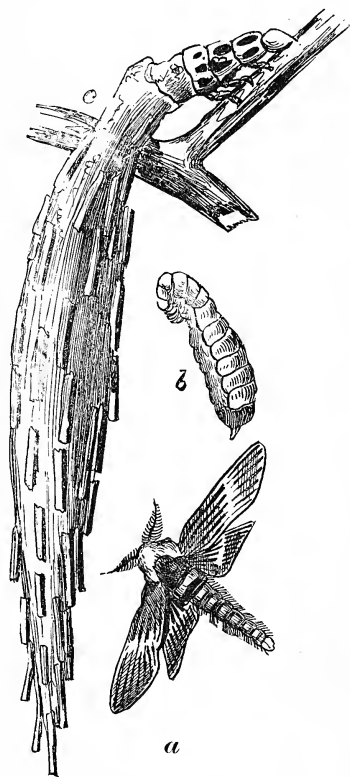
of things. Look first at the figure to your left; ask any one what it is and the response, promptly given, will be that it is a wasp or bee, to which, indeed, it bears the closest resemblance; but the little fellow is nevertheless as true a moth as any of the dusty millers that fly to your light on a summer evening; his similarity to the bee has caused him to be named the bee-moth (*Trochilium apiformis*); though a moth, he flies during the day, and when on the wing there is little to distinguish him from

the honey-making insect nature has caused him so successfully to counterfeit. There is a near relation of his that mimics, in appearance, exactly, the great, noisy humble bee, and yet others that, when on the wing, can scarcely be distinguished from the humming-bird. These latter are known as the humming-bird moths, and occur in various parts of both the old and new world, being comprised in the genus *Macroglossa*.

Next we come to an odd, apparently ill-mated, pair ; the winged gentleman disports himself as he will, going whither he pleaseth, whilst his wingless helpmate, of a more domestic nature, never leaveth the house from the time of her birth until the hour of her death. This curious couple belong to the genus bearing the, by no means euphonious, name of *Oiketicus*. The figures represent a foreign species, and are drawn half the natural size ; *a*, is the male, *b*, the female, and *c*, the worm, or larva, from which they are produced, carrying its sack-like case along wherever it goes. Every one is familiar with our common bag-worm, terribly designated by science as *Thyridopteryx Ephemeraformis*, which is a smaller representative of the family here pictured. The worm makes its sack by spinning together fragments of sticks or leaves, from whatever tree it favors with its presence ; when the worm is full grown the upper end of the sack is fastened securely, by silken threads, to a branch ; it then changes to the pupa within, and in due time the male emerges, a small winged moth, not unlike a large fly in appearance. The female never acquires wings ; her legs are too incomplete to enable her to walk, but she has no need of either wings or legs, as her whole existence is spent within the sack which she spun when a larva or worm ; she is never to see the light, never to taste food. The peculiar structure of the male enables him to communicate with her, for the propagation of the species, without her leaving the pupa case or ever seeing her partner. She lays her eggs and dies within the case, her shrivelled remains being probably the first food of the young larva when they hatch. Soon after hatching, the latter scatter, each making his little sack, and the old story is repeated without variation, save in the case of such unfortunates as prematurely come to an end in the maw of some insectivorous bird.

But from this homely lot, which have already taken too much space, we will turn to something brighter and prettier. Figure *d* represents the anchor moth (*Callimorpha Interrupto-marginata*), of a creamy buff color, with an anchor marked in black, as distinctly as those we tattooed on our arms when school boys, in emulation of "ye jolly tar." Of course, when the moth opens his wings to fly (he is shown when at rest) the anchor is separated longitudinally in the centre, one half being on each wing.

Figure *e* is one of a group of lovely little butterflies that swarm the forests bordering the mighty Amazon river, in South America. They are technically designated by the name of *Catagramma*, but the common name by which they are known





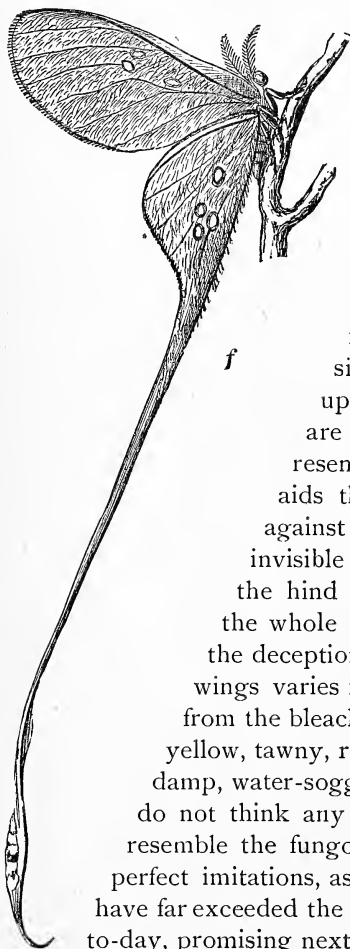
d

to the natives and other residents is the "eighty-eights," from the black marks resembling the figures 88, on the silvery white ground of the under side of their hind wings. On the upper side, in strong contrast to the lower, the color is deep velvet black, with shining silvery-green bands; the figure shows it of the full size. There are many kinds of these butterflies, all very beautiful.



e

We now have (*f*) a representation, in the natural size, of a very rare moth from Sierra Leone, in West Africa, which is remarkable for the unparalleled length of the tails of the hind wings in the male; in the female they are only half as long. Its color is pinkish; the original of the figure is the only example of this insect in any collection in this hemisphere. It is called the Argus moth (*Eustera argus*).



f

To close, for the present, we come, though last, to by far the most interesting of anything we have touched in this little article—the world-famed "dead-leaf butterfly," of China, India, and the Pacific Islands (*g*). In nature it is a third larger than our figure. When the wings are expanded the upper side discloses a surface of grayish blue, crossed on the upper wings by an orange band; but when the wings are closed, as is the animal's wont when at rest, the resemblance to a dead leaf is perfect; its mode of sitting aids the imitation; the antennæ or feelers are thrown back against the edge of the wings, the abdomen is enclosed and invisible within the fold of the hind wings, the stem-like tail of the hind wings touches the twig or branch on which it sits, and the whole resemblance to the dead leaf is complete; and to aid the deception still more, the color of the under, or leaf side of the wings varies in each individual, imitating every shade of a dead leaf, from the bleached, worn, dried-out, whitish buff, through all shades of yellow, tawny, reddish, brownish, to the dark brown, almost black, of the damp, water-sogged leaf. In fact, of several hundred that I have seen I do not think any two were of the same shade; some show marks that resemble the fungoid spots, or mildew. The mid-rib and other veins are perfect imitations, as shown on the sketch, which is true to nature. But I have far exceeded the space first contemplated, and suddenly say good-bye, for to-day, promising next time something about butterflies with an extra number

of wings; about some that are half male and half female; about butterfly mules; about stone (fossil) butterflies; about butterflies that resemble lichens, and a hundred other things besides, perhaps.



GAMES OF THE HAIDAH INDIANS.

BY JAMES DEANS.

The principal amusement of the young Haidah Indians, on the northwest coast of British Columbia, is sailing about in canoes, often in little ones made for them by their relatives. The boys also make little ships which they rig up and sail about. They also spend a great deal of their time in fishing. The Haidahs are great sailors and are constantly making voyages to distant parts. The girls make themselves dolls with rags; sometimes they make them out of a piece of wood which they dress in a fragment of blanket. The boys make a sort of whistle, peculiar to themselves. It is made in this manner: A piece of wood, four inches long and an inch thick, is split in two, lengthwise; the rough edges of the split parts are then smoothed for half the length and hollowed out; a blade of grass is laid between the two parts, which are then firmly tied together in order to prevent the grass from being displaced. By blowing through the cavity a variety of sounds can be made.

It has been common, from unknown times, for all the native tribes on this coast to play the game of "shinny," being played in the same way that our own fathers used to play it, and as I have often played it myself, with crooked stick and wooden ball. Another game with which they amuse themselves is played in this manner: A number of young persons squat around the fire; one of the number, by request, takes a piece of wood in his or her hands and rolls it backward and forward between the palms, saying in their language, "Bent wood, will you tell me who kisses the girls (or, if a girl, the boys)? Bent wood, tell me who is a bad boy (or girl, as the case may be)?" And so on through an endless number of questions, the stick, which is bent in this shape, 7, always pointing to one or the other of the party. This pastime is very amusing and causes unbounded merriment.

Natural History.

Zoölogy. Two years ago, when studying the three species of land salamanders, or semi-aquatic ones, I was surprised to find so great a number with lacerated tails, or that had lost a greater or less portion of the member. During the months of April and May, whenever opportunity offered, I watched the dusky and red "water lizards," as the farmers call them, and while I could not discover that the tails of the creatures were of any use, I did witness many incidents that showed they were frequently the direct cause of the animal's death or maiming; and also, that scores of them, with but mere stumps of tails, were as active, as well conditioned, and, to all appearances, as happy, as any of their longicaudate brethren.

My first effort was to determine what animals were given to nipping the caudal appendages of these inoffensive salamanders.

Finally I discovered a meadow mouse with the tail of a dusky triton in its jaws. The frantic efforts to escape, on the part of the batrachian, resulted in the tail giving way, and the mouse had but a meagre breakfast, if this was all he ate. I think, from this fact, that, as all rodents are eminently carnivorous, mice and squirrels may be largely the offenders; but to a greater extent the amputation of tails must be attributed to the hundreds of turtles, which, during the summer, leave the creek and water for inland, often, to deposit their eggs. And again, only look at a dusky salamander, as he scuttles away from you and hides under a stone; the chances are, nine in ten, that the stone will conceal only his body, and there he remains, in fancied security, with two inches of tail in broad daylight.

To further satisfy myself that these tails were of more harm than good, I captured a hundred or more dusky salamanders, and endeavored to learn to what use they put their tails. This was an utter failure. Were they a guide in running? I instituted an elaborate series of races, and those whose tails I

had amputated generally made the better time, on the principle, I suppose, of having less weight to carry.

Finally I amputated the tails of all my captives, and only four per cent. succumbed to the operation. The others were soon set free, and some are even yet in full health and vigor, and neither suffer fear of attacks in the rear, nor show the least disposition to be jealous of their elongated brethren, with whom they associate on the most friendly terms.—*From Dr. Charles C. Abbott's forthcoming book, "Upland and Meadow."*

Amongst the additions to the Philadelphia Zoölogical Garden during the past month, were an American porcupine, a puma, five Guinea baboons, a fallow deer, a Virginia deer, four red foxes, one gray fox, four American flamingoes, a turkey buzzard and an English sky-lark.

Ornithology and Oölogy.—*Nesting of Helminthophaga pinus.*—No nests of the above species have ever been taken by the writer within the limits of Philadelphia, nor have instances of such finds been recorded by collectors. Further west and south, in the adjoining counties, especially in that of Montgomery, such structures are often obtained. In the summer of 1877, about the tenth of June, a nest containing four eggs was discovered by the writer near Mill Creek, Lower Merion township, of the latter county. It was built upon the ground between two blackberry bushes, and completely hidden from view by the surrounding verdure.

The succeeding year, as early as the second of June, another nest was met with in the same locality. Instead of eggs, four young birds, fully one week old, occupied its capacity. Like the other, it was placed upon the earth, and held in position by grasses. Allowing the utmost limit of time for the essential processes of nidification, oviposition and incubation, it could not have been commenced later than the tenth of the preceding month.

When nearing the nest, we became apprised of its presence by the restlessness

which the male bird manifested, and also by the angry vociferations to which he gave expression. We had, however, too much sense to venture too close. The female was a very assiduous parent, and so engrossed with the cares of maternity, that she could be approached with the least difficulty.

The young, even when able to fly, were still the objects of parental solicitude. It was interesting to watch with what eagerness the passing insect was seized for their benefit, and how tenderly it was transferred from the parent's bill to that of the offspring.

THOMAS G. GENTRY.

During the latter part of May of this season, I found a swamp sparrow's nest in a hole in a tree about three inches deep, and four feet from the ground, and as it is the first I have found or seen in like situation, I thought I would notify you.—C. M. R., *Staten Island, N. Y.*

Botany.—Many species of *Sphagnum*, or "peat moss," fruit during the month of July. They are found in bogs and marshes, being particularly abundant in New Jersey. At Tuckerton is a beautiful lake, fed by several streams which flow through pine swamps. Along the banks of these tributaries several rare *Sphagna* may be found growing in abundance, including the giant *S. cuspidatum*, var. *plumosum*.

THE HART'S TONGUE FERN.—The United States have very few known stations for this curious fern, and some of these happen to be within easy reach of my own home. It loves limestone, and at the Green Lakes I have gathered many beautiful specimens, having due regard to its perpetuation. The Green Lakes are curious in themselves. They are small, deep ponds, with limestone cliffs on three sides, 200 feet high. The shores are marly and the waters sulphurous at the bottom. The cliffs are broken into the many fantastic forms which limestone assumes, and currents of cold air issue from the lower cavities. Fallen masses of rock are covered with the Walking Fern in great profusion, and on

the summits are found the stiff fronds of *Pellaea atropurpurea*, with small forms of *A. marginatum*, and many other kinds. Within a stone's throw may be gathered twenty species, while others, quite rare, are found not far away.

There grows *Scolopendrium vulgare*, not so common as its specific name implies. And yet it is not readily found. On my first visit there, nearly twenty years ago, I met an experienced botanist vainly searching for it, and it was years later that I gathered a few imperfect specimens. Then I learned the secret. From the root-stalk springs a number of long, undivided, leathery fronds, not inaptly described by the name. Often they are broadly auricled at the base, and are generally widest just before they taper to the apex. On the back are the dark lines of the sori, edged by the gray indusia. The fronds with us are seldom over a foot long; far inferior to those of Great Britain. It is curious how few and how far apart are the stations of this fern in America, but perhaps this may be due to its growing in places difficult of access. Fortunately for its perpetuity, it is not so handsome as to be sought for generally.

W. M. BEAUCHAMP.

The *Scientific American* describes a wonderful plant of Sumatra, belonging to the genus *Arum*. The spadix of this gigantic flower exceeds six feet in length, and the bell-shaped spathe from which it rises is three feet in diameter. The latter is of a pale greenish tint upon the inside, and a rich, black metallic purple without. Its edges are richly crumpled, and toothed in a fantastic manner.

Mineralogy.

A light pink stilbite, specimens of byssolite, apophyllite and tetrahedrite have recently been found at the Falls of French Creek, northern Chester County, Pa., a rich mineral country.

Archæology.

Mr. S. L. Frey, of Palatine Bridge, N. Y., found in an Indian grave in Montgomery Co., some time ago, a curious vessel, which had evidently been traded to the Indians by one of the early Dutch settlers, probably during the seventeenth century.

It is a gray, stone ware, salt-glazed jug, probably *Grès de Flandre*, with decoration



—lions, rosettes, etc.—in relief, and outlined with bright cobalt blue. The form of the vessel, with the ornamentation, is unusual for this kind of

ware. In quality it is similar to the "Fulham" jug or "gray-beard" figured in the June MUSEUM. The accompanying engraving, reduced, will convey a good idea of the shape of Mr. Frey's vessel, which measures about five inches in height.

Scrapers.—A scraper is a piece of worked stone, flat on one side, and beveled from the other surface by chipping. Aside from this, it may be of almost any size or form. The usual material is flint, hornstone, or jasper, but the form and size vary greatly. A very common kind may have been made from broken bases of barbed arrow-heads, although, in many cases, this form of scraper seems to have been designed from the first. In this the edge is a crescent, the barbs forming the points. Some of these, however, are identical in outline with the arrows called bunts.

Another frequent form is leaf-shaped, finely chipped, and might be classed as a knife, but the broad end is a characteristic scraper. By no means rare is a massive kind, of a horse-shoe outline when laid down, but thickest toward the broad part. These are sometimes quite large. Then there is a class quite rare in collections, of which I have seen scarcely half a dozen examples. It may be called a sickle form, but the inner curve is thickened, and is the scraper edge. It would seem that these were used on wood, or perhaps sinews, not being fit for hides.

A good many examples of another kind occur, which at first seem large and long knives, and may have been used as such. Yet they have the characteristic single flake on one surface, and the beveled edge on the other. They are comparatively narrow, and being several inches long, they are generally curved, and often twisted. The ends are rounded, or very slightly pointed, the long edge apparently having been used.

One unique specimen I picked up three years ago. It is of dark green jasper, about two inches long, not very thick, and broadly flaked, except at the edges. The form might be called leaf-shaped, but the broad end has an angle in the centre, and a projection on each side. The small end is rounded and notched on either side, as though for suspension, or fastening by a cord. The thickness is quite uniform longitudinally. I have seen none like it.

Circular and elliptical scrapers occur, and I have one that is cruciform in a massive way. Another has a scraper base, but the long and slender form of a drill. Many are decidedly arrow-shaped, and some are very small.

There is one curious circumstance about these articles; I have never yet found them on those enclosed sites, whether earthworks or stockades, where I have gathered hundreds of other relics. The same thing is true of the flint drills so widely distributed, of soap-stone articles, and other things. As these sites occur almost side by side, differences in age or nationality would seem probable reasons for this.

I have said nothing of the use of scrapers. The common understanding is that they were placed in handles, as by the Esquimaux now, and used in scraping hides. Perhaps this is true of some, but it would have been slow work with those less than an inch long, and not much more than half that width. The sickle forms, which are sometimes more like little cimeters in outline, might have been used in making lances or arrow-shafts. In any case they could only have been applied to a curving surface.

Young collectors will do well to pay more

attention to these articles. At first they are almost always overlooked, especially where other relics are fine or abundant, many suggesting broken or imperfect implements. Fuller examination reveals their character and increases our knowledge of their many forms.

W. M. BEAUCHAMP.

Philately.

The first stamp dealer and collectors in the United States arose in 1861; the first hand-book appeared in 1863, and the first philatelic paper in 1864.—*Exchange*.

The entire number of match stamps is 283 varieties of adhesive, and 195 varieties of match wrappers.—*The Hermes*.

According to the *Collector's Companion*, Mr. E. R. Durborow, of Philadelphia, possesses a valuable collection of stamps, numbering over 5000 specimens. Among many rare ones are a New York Post Office stamp, 5c. black, canceled with the postmaster's initials, a genuine specimen of Blood's large despatch stamp with man stepping over houses, and forty-six varieties of Peruvian surcharged stamps.

Perforated stamps are separated from each other by round holes like those now used in this country, ○○○○○○○○. Rouletted stamps are separated by narrow oblong cuts like the current Chili stamps, ----- . Unperforated stamps are not perforated in any manner, but have to be cut apart.—*Philatelic Monthly*.

Among the rarest of Government locals is an original specimen of the New Haven, Conn. The stamps were issued by E. A. Mitchell, postmaster in 1845, but all disappeared until 1871, when a solitary specimen was discovered in a collection formed by a New Haven lawyer, and which was stolen from him and sold to a New York dealer. It is probable that not over two thousand stamps, in all, were sold.—*The Stamp World*.

Numismatics.

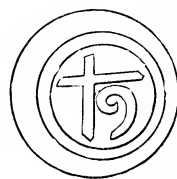
NOTES BY HENRY PHILLIPS, JR.

PORCELAIN MONEY OF SIAM.

In the possession of Dr. Vilhelm Bergsoë, of Copenhagen, there are many hundreds of remarkable specimens of the porcelain coinage of Siam. Upon the occasion of my visit to his great collection, he kindly presented to me the five pieces here figured. It seems that the bullet-money being unsuited to the requirements of the gambling table, of which the Siamese are especially fond, and which is (or was) encouraged by the government, permission was granted to their proprietors to use special counters of *porcelain*, glass or lead, of various shapes and inscriptions. These "rapidly became a favorite medium of exchange, and filled so well a long felt want of small money, that the circulation went much beyond its legal sphere," and over 890 varieties are known to have existed. Counterfeiting, naturally, soon took place, and the currency was suppressed in 1871.



1



2

No. 1 represents a Salu'ng (15 cents), obverse, a dragon; reverse, an inscription.

No. 2, a Salu'ng, obverse, a rosette; reverse, inscription.



3



4



5

No. 3, a Salu'ng, obverse, a crane; reverse, a stag.

No. 4, a Salu'ng; inscription.

No. 5, a Fu'ang (7½ cents).

The meaning of the inscriptions is the name of the Hong, the value, some favorite motto or classical quotation, and sometimes the value in Siamese characters.

Mr. C. F. Gebert, of Nürnberg, has for sale a unique collection of 41 medals, struck on the occasions of the visits of Royal personages to foreign and domestic mints, between 1775 and 1881. Of these, twenty-two were struck in Paris, the remainder in Cassel, Karlsruhe, Dresden, Stuttgart, Rouen, Monaco, Venice, Milan, Brussels, etc.

Mr. R. Forrer contributes to *Antiqua* (II, p. 24), an interesting article upon certain Gallo-Italian silver coins, illustrated by plates representing these curious pieces that retrograded from civilization to barbarism.

In order to remedy a great scarcity of small change, the Austro-Hungarian Finance Minister ordered, last November, the coinage of two million pieces of copper money.

Collectors and Collections.

Harry G. Clay, Esq., of Philadelphia, now owns the magnificent collection of Peruvian pottery and antiquities mentioned by Dr. Daniel Wilson, in his *Prehistoric Man*. This collection was made and brought to this country by the Hon. Randolph Clay, some twenty years ago. The vases number several hundred.

In the Musée Lorrain, France, there are about 200 antique vessels, idols, etc., from Mexico and Peru.

The museum of the *China Branch of the Royal Asiatic Society*, in Shanghai, contains a large collection of specimens of natural history from all parts of Asia.

Mr. R. C. Lichtenstein, of Boston, Mass., possesses a collection of heraldic book-plates, numbering about 2000 specimens. This is principally an American collection.

The extensive collection of mosses owned by Mr. C. H. Fitzgerald, of Pau, France, includes the whole publication of Sullivant and Lesquereux and many rare species from the herbarium of the late Mr. T. P. James.

RARITIES IN VARIOUS COLLECTIONS.

An ancient silver kettle, a rare piece of work, formerly the property (so it is said) of a certain Inca was recently offered for sale in Lima, Peru, for \$1000. There were also offered three valuable Indian paintings, for \$10,000, \$4000, and \$2000, respectively. We have not been informed whether or not the sale has been effected.

In the collection of the Numismatic and Antiquarian Society, of Philadelphia, is a set of Turkish paper money, which is known to be genuine, presented to the Society several years ago. They are particularly valuable, because bank notes are not now in circulation in that country, the Government having been obliged to stop their circulation some time ago owing to the many forgeries.

The wife of an enthusiastic Egyptologist writes to a friend in New York, from Cairo, that, in opening some of the ancient tombs recently, lotus flowers were found on the breast of a priest, looking as fresh as if only a few days old. In one of the blossoms was found a perfectly preserved bee, just as it was when unintentionally entombed with the flowers, about 5000 years ago.

Mr. J. S. Spinney, of New York, is the possessor of a lady's antique comb, of elaborate design, from Nicaragua, which possesses an intrinsic value of upward of \$250. It is of gold, set with numerous pearls, garnets, and beautiful specimens of topaz, and was probably made, during the Spanish occupation, for a figure of the Virgin Mary in one of the early churches. The workmanship is exquisite.

RECENT SALES.

The *Balmanno* collection of coins and medals, catalogued by Mr. Lyman H. Low, was sold by Messrs. Bangs & Co., in New York, on June 10th and 11th, 1885. We make the following quotations: A Massachusetts Pine Tree shilling (1652), with 14 branches, \$3.75; another, with 11 branches, \$3.50; a U. S. Eagle cent (1856) nickel, proof, \$3.10; a proof set of 1857, from one cent to one dollar, \$20.00; many proof and uncirculated silver halves, some of early dates, brought only face value. A British War medal of Battle of Germantown (1777), copper, brought \$18.25; a provisional dollar of Mexico (1811), \$18.25; a Cork shilling (1647), octagonal, \$20.50; Isle of Man half-penny (1733), pattern in *silver*, \$3.60; a *gold hair* Unicorn of James III (1486), \$9; a *gold* Lion of Mary (1553), \$11; Anglo-Saxon penny, Burgred (852—'74), \$11.25; another of Cnut "The Little" (883—900), \$11.70; one of Alfred "The Great" (872—901), \$9.25; a penny of Ethelstan (925—'41), \$13.10; a Pound Piece (1642) of Charles I, \$46; Blondeau's pattern half-crown, Commonwealth (1648—'60), \$70.50; Portcullis crown of Elizabeth, \$146.25; the highest price, \$205, was paid for a Pound Piece (1644) of Charles I.

The *Athole* collection, also catalogued by Mr. Low, was sold at the same rooms on June 18th, 1885. A Roman Imperial gold Trajan brought \$10.60; a half-crown of Cromwell (1656), \$8.25, and a pattern silver farthing of Anne (1713), \$13.25.

We have received the catalogue of a collection of coins, stamps, autographs, etc., to be sold by auction at the rooms of Geo. A. Leavitt & Co., New York, on July 24th, 1885. Catalogued by Ed. Frossard.

EXCHANGES AND REVIEWS.

The *Thirteenth Annual Report of the Zoölogical Society of Philadelphia* has appeared. During the past year 455 additions have been made to the collection of animals, of which 154 were mammals, 213 were birds,

and 88 were reptiles and batrachians. The most noteworthy of these were a pair of Moor Macaque monkeys from Borneo; a pair of Anubis baboons from West Africa; a young hippopotamus from the Upper Nile, in Egypt; a viscacha, a burrowing rodent from the plains of Buenos Ayres, with the habit of collecting about the mouth of its burrow all articles it may find, especially those of a glittering appearance; a brush-tailed porcupine from West Africa; a hairy armadillo from South America, and a female jaguar from the Upper Amazon. The most interesting specimen of all, however, is the brush-turkey from New South Wales, which, at the season of incubation, sometimes builds a mound of earth and rubbish reaching a diameter of twenty-five feet and a height of five, in the centre of which a large pit is formed for the eggs, which are left to be hatched by the heat of the decomposing vegetable matter.

Catalogue of Musci and Hepaticæ of North America, north of Mexico, arranged by Miss Clara E. Cummings, of Wellesley College, Wellesley, Mass., May, 1885. A pamphlet containing the names of 888 species of mosses and 231 liverworts, etc. It is designed as a check and exchange list, being based upon the "Manual of Mosses of North America," by Lesquereux and James, and the "Descriptive Catalog of the N. A. Hepaticæ, North of Mexico," by L. M. Underwood. It includes the names of a number of new species, and will prove a great help to bryologists in the arrangement of herbaria. Price 35 cents.

Geographical Names of Mexico, Alphabetical Catalogue of Places in the Nahuatl Language. Hieroglyphic Studies of the Tribute Roll of the Codex Mendocino, by Dr. Antonio Peñafiel, in charge of the general direction of statistics of the Mexican Republic. This is a large quarto volume of 260 pages, containing several hundred cuts of hieroglyphs or symbols for the names of places, with descriptive text. It will prove of inestimable value to philologists and students of ancient Mexico.

The Oölogist's Directory, recently received, is a model of artistic presswork. It is printed on tinted card board, in large, clear type, with an antique felt-paper cover, and contains the names and addresses of over 400 collectors. Compiled by Messrs. Davis & Baker, North Granville, N. Y.

The Stamp Dealers of Great Britain, a little pamphlet giving the names and addresses of several hundred dealers, philatelic publishers, etc., will be found to be invaluable to stamp collectors in the United States. Published by C. H. Nunn, Bury St. Edmunds, England. Price 5d.

The Century Magazine for July opens with a paper of great interest by Rose G. Kingsley, entitled "George Eliot's County." "Social Life in the Colonies," by Edward Eggleston, is a valuable and entertaining contribution to U. S. history. "Mistral," by Alphonse Daudet (with frontispiece portrait), is a charming little sketch of the Provençal poet. The notes on the life and death of Frank Hatton, the explorer of North Borneo, are entertainingly, though pathetically written by his father. George Bancroft contributes "A few Words about Henry Clay," accompanied by full page portrait. The historical war papers are of great interest. *The Century Co.*, Union Square, New York.

The Magazine of American History for July is a remarkably strong number, and contains a valuable historical paper on "Washington in March and April, 1861," by Lieutenant General Chas. P. Stone, a short article on "The Seizure and Reduction of Fort Pulaski," by Colonel Charles C. Jones, Jr., besides a number of other Civil War Studies. Published at 30 Lafayette Place, New York.

In *The Magazine of Western History* for July, Russell Errett contributes his second paper on "Indian Geographical Names." "The Banks and Bankers of Cleveland," by J. H. Kennedy, is a readable article profusely illustrated with steel portraits. Published at Cleveland, Ohio.

Editorial.

Mr. Herman Strecker has kindly volunteered to answer, through the pages of *THE MUSEUM*, any questions relating to butterflies and moths. All such communications should be addressed to the Editor. We hope shortly to announce the names of specialists in other branches of science, who will be willing to assist our readers in the same manner. In this way we shall be enabled to render young collectors valuable assistance in their studies.

A serial, now in course of preparation, will soon be commenced in the pages of *THE MUSEUM*, which will extend through the year. This will prove of engrossing interest to boys and archæologists in general, and will be, alone, well worth the subscription price of the magazine. It will embody an account of the travels and explorations of a club of young archæologists in quest of relics, and, while full of exciting adventure and thrilling episodes, will be based strictly upon fact, and will make our embryo scientists familiar with the various remains of the former inhabitants of America.

One of the great Philadelphia daily newspapers thus concludes its review of our July number: "It is a wonder the boys of the country do not subscribe *en masse* for this valuable little magazine. It is full of just the kind of reading they like."

We trust, and believe, that the time is not far distant when each boy in the land who desires to know more of the wonders of nature, and the rare and beautiful things in art, will be a constant reader of *THE MUSEUM*. The chief aim of the publishers is to furnish our youth with pure, entertaining and instructive reading. Each month brings us hundreds of evidences that our efforts are being appreciated by parents and young naturalists. We want to increase our circulation to 100,000 copies monthly, and quadruple the size of the magazine. This we can do if our young friends will continue to help us.

BLACK HILLS MINERALS.

35 Varieties, Labeled and postpaid: 25 Fragments, good size, 50 cts.; 30 1 x 1 and more, \$1.00; 1½ x 1½, each 6 cts.; 2 x 2, each 10 cts.; 2½ x ½, each 15 cts.; 5 up, any sizes and selections, \$2.25; 10 up, any sizes and selections, \$4.00; Bacculites, Cheyenne River, 50 cts. to \$1.00; Nautilus, Cheyenne River, 25 cts. to \$1.00; Fine Hot Springs (Ark.) Crystals, 1 inch to 5 inch clusters, 10 cts. to 65 cts.; New Mexico and Oregon Arrow-heads, from \$1.00 to \$2.50 per doz. (selling these off cheap, to reduce large stock); Tomahawks, War Clubs, etc., etc. 4-page price list. **L. W. STILWELL, Deadwood, D. T.**

COINS AND MEDALS.**ANCIENT, BYZANTINE, MEDIÆVAL AND MODERN.**

An authentic attribution and full description accompanies every coin which I offer at and above 10 cents.

Direct importations from the leading coin marts of Europe.

The most complete and best assorted stock in America.

Invoices of Coins submitted on approval to parties furnishing satisfactory references.

Catalogues of Numismatic works on sale, 15 cents, postpaid.

Coin price list and circulars, upon receipt of postage.

LYMAN H. LOW,

NUMISMATIST,

Season of 1885.

838 Broadway, New York.

THE YOUNG OÖLOGIST.

A Thirty-two Page Monthly Magazine.

DEVOTED TO

BIRDS, THEIR NESTS AND EGGS.

INVALUABLE TO THE YOUNG NATURALIST.

Sample Copy, 8 Cents.

Three Sample Copies, 15 Cents.

Yearly Subscription, 80 Cents.

ADDRESS

THE YOUNG OÖLOGIST,

ALBION, N. Y.

WM. F. FELL & CO.,
PRINTERS

Nos. 1220-24 SANSOM STREET, PHILADELPHIA, PA.

BRIEFS, PAPER BOOKS, BLANKS AND LEGAL PRINTING GENERALLY.

Special attention given to the Printing of

BOOKS, MEDICAL PUBLICATIONS, GENEALOGICAL, NUMISMATIC, PHILATELIC, NATURAL HISTORY AND AMATEUR PAPERS.

ARTISTIC WORK AND FINE MAGAZINE PRINTING A SPECIALTY.

ESTIMATES CHEERFULLY FURNISHED ON APPLICATION.

FIRE-PROOF VAULTS FOR
STORAGE OF PLATES.

Printers of "The Museum." MECHANICAL DETAILS RECEIVE
OUR PERSONAL SUPERVISION.

The American Antiquarian and Oriental Journal.

AN ILLUSTRATED MAGAZINE, DEVOTED TO ARCHÆOLOGY AND ETHNOLOGY.

Published by F. H. Revell, 150 Madison Street, Chicago, Ill.

SUBSCRIPTION, \$4.00 PER YEAR.

Rev. STEPHEN D. PEET, Editor-in-Chief.

Associate Editors: DR. D. G. BRINTON, PROFS. A. C. MERRIAM, J. AVERY, MESSRS. HENRY PHILLIPS, PH.D., A. S. GATSCHET and REV. J. O. DORSEY.

Correspondence solicited, especially from collectors of Archæological relics.

SEND FIFTY CENTS FOR SAMPLE COPY.

In Answering Advertisements, please mention THE MUSEUM.

The Agassiz Journal.

Published monthly; about same size as this paper. Contains interesting articles on all natural history subjects, stamps, coins, exchange department, queries, notes of interest, **Big Fraud List**, etc., etc., etc. We will send this valuable magazine for one year, and 12 choice and rare cabinet specimens, for 50 cents. Remit per Postal Note, stamps or registered letter. Sample copy, 4 cents; positively none free.

THE AGASSIZ PUBLISHING CO.,
31 State Street. LYNN, MASS.

THE Hoosier Mineralogist and Archæologist.

A Monthly Journal that should be in the hands of every Collector in the United States. Among its contributors are many of the most noted Scientists of the day. Price per year, 25 cents. Specimen copy, 3 cents.

HARRY F. THOMPSON, Editor and Publisher,
17 Butler Street, Indianapolis, Ind.

GENEALOGICAL RECORD

OF

THE ATLEE FAMILY.

The Descendants of Judge Wm. Aug. AtLee and Col. Samuel John AtLee, of Lancaster County, Pa.

By EDWIN ATLEE BARBER, A.M.

An 8vo. book of 130 pages, containing about 2000 names, printed on the best paper and handsomely bound; illustrated with portraits, old buildings, etc. Only 200 copies were printed, for private distribution. A few remaining copies, which were not claimed, are now offered for sale.

PRICE \$2.25.

Address the Editor of THE MUSEUM,
P. O. Box 22, Philadelphia, Pa.

THE MUSEUM TESTIMONIALS.

"The *Museum* is a charming and promising little magazine. I trust—and expect—that it will take and keep an important place, and do much to help young folks in the studies which you and I have so much at heart."—*Joseph Bragge*, Birmingham, England.

"Success should attend your efforts to give to the young a natural history magazine that should be thoroughly popular, and, at the same time, accurate and reliable in its statements. That it supplies a necessity that has long been felt to exist, is unquestioned."—*Thomas G. Gentry*.

"June *Museum* received. If you maintain the present standard of excellence, the magazine will soon become one which every young worker in Science in the land *must have*, if he wishes to keep abreast with his fellows."—*Charles C. Abbott, M.D.*

"It is handsomely printed, and is illustrated."—*Illustrated Christian Weekly*, New York.

"The *Museum* ranks first. . . . That this magazine will undoubtedly fill a long-felt desire by both old as well as young collectors, is plainly seen."—*Hoosier Mineralogist and Archæologist*, Indianapolis, Ind.

"We admire its compact columns, clear print, and short and pointed contributions."—*The Register*, Bordentown, N.J.

"It possesses all the elements of popularity, and should succeed."—*Sunday Mercury*, Philadelphia, Pa.

"A neatly printed and carefully edited monthly magazine for young naturalists and collectors. It contains a number of well written articles on taking topics, which are nicely illustrated."—*The Independent*, Germantown, Pa.

"Its attractive cover and well-filled pages have already won for it a prominent place among the journals of its class."—*Keystone Stamp and Coin Gazette*, Altoona, Pa.

"Its perusal was quite a treat to us, and if it keeps up its present standard of excellence it cannot fail of success."—*The Collector*, Hull, England.

"The second number, just issued, contains an interesting paper entitled: 'The Symbol of the Cross in America,' by Dr. Brinton. Following is a collection of curious scientific facts, of varied character and great value."—*Sunday Press*, Albany, N. Y.

"It is a model in every respect, and we hope that the young scientists of our country will give it the encouragement that it truly deserves."—*Philatelic Journal of America*, St. Louis, Mo.

"The several departments—Natural History, Archæology, Mineralogy, Philately, Numismatics, etc., contain many interesting paragraphs for students and collectors."—*The American*, Philadelphia, Pa.

"In the June *Museum*, which every boy ought to have if his soul is properly devoted to collecting (because a boy is not good for much if he does not collect butterflies, stamps, coins, minerals or something), Dr. Brinton shows how common the symbol of the cross was in primitive Mexican and American adornment. Professor Gentry contributes a short sketch of Professor Edward D. Cope. The promises for future numbers are quite remarkable; but if the magazine only keeps up to the level of interest and value which the first two have shown, it will be a pronounced success in journalism."—*The Press*, Philadelphia, Pa.

In Answering Advertisements, please mention THE MUSEUM.

Mr. J. G. Fotheringham, Bookseller and Publisher, No. 8, Rue des Capucines, PARIS, and No. 59, Rue d'Antibes, CANNES, France, is authorized to receive subscriptions and advertisements for *The Museum*.

The Museum Premiums.

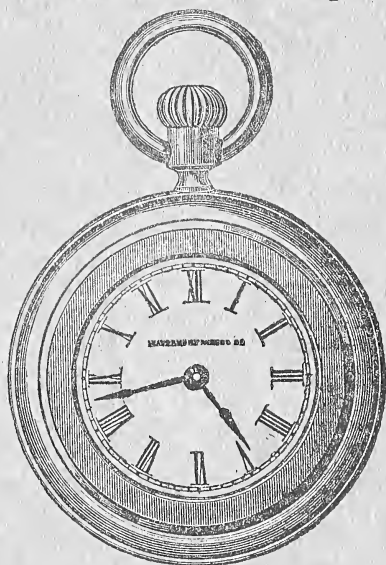
Desiring to bring the Journal to the notice of all who are engaged in collecting, or are interested in the study of Natural History, the publishers of *The Museum* make the following liberal offers:—

1. *For Three Yearly Subscriptions*, one dozen Slides for Microscope, French Educational Objects; or,
2. Six Cabinet Photographs of Peruvian and Chiriqui Antiquities, Ancient Vases, Idols and Gold and Silver Ornaments; or,
3. One large Pocket Magnifying Glass, hard rubber case, two lenses (1 and $1\frac{1}{4}$ inch diameter).
4. *For Five Subscriptions*, a collection of 50 different species of foreign and domestic Mosses, correctly named.
5. *For Six Subscriptions*, a collection of 100 specimens of Minerals, all different, correctly named; or,
6. A copy of the Rev. J. G. Wood's "Common Objects of the Microscope" (containing 400 engravings, in colors) and a *Boy's Compound Microscope*, packed in a polished walnut case.
7. *For Fifteen Subscriptions*, *The Museum* for one year; a fine collection of 100 pressed and correctly named foreign and American Mosses; a copy of Wood's book on the Microscope and a *Universal Household Microscope*, packed in a polished mahogany case.
8. *For One Hundred Subscriptions*, a *Histological Binocular Microscope*, 14 inches in height, with necessary accessories, in an upright mahogany case. This is a splendid \$75.00 instrument.
9. *For Four Subscriptions*, 12 fine Indian Spear and Arrow Points.
10. *For Fifteen Subscriptions*, a splendid collection of 100 beautiful butterflies, all different, carefully prepared and mounted; many of them rare.
11. *For Twenty Subscriptions*, a collection of 25 fine bird skins, all different, including a number of rare species.
12. *For Fifty Subscriptions*, a choice collection of genuine Indian relics,—all unusually fine specimens,—worth over \$35.00, including a stone pipe, a fine piece of ancient pottery (entire vessel), ceremonial badge, perforated tablets, large and perfect spear heads and arrow points of rare forms, fragments of painted and corrugated Pueblo pottery, from ancient ruins in Southern Utah, shell beads, flint awls, haliotis-shell pendants, bone perforators, etc., from ancient graves in California. The first to avail themselves of this offer will secure the best specimens, although all of the sets are very desirable.

(OVER.)

How any Boy or Girl may become the Owner of a Good Watch!

"The Waterbury."



The publishers of *The Museum* have made arrangements with the manufacturers of the celebrated **Waterbury Watches**, to procure them in large numbers, at the lowest rates, and we are therefore enabled to make the following surprising offer:—

13. For Six Subscriptions we will send one of these watches, securely packed and charges prepaid, to any address in the United States. The accompanying engraving represents the watch as it is.

There is not a bright boy or girl in the land who cannot procure, *in one day*, at least six subscribers for *The Museum*. Send to us for a specimen copy to show your friends and you will be surprised to find how easy it will be to procure the necessary number of subscribers and thus secure an excellent standard timepiece, free of cost.

Premiums.

Transportation on premiums 1, 2, 3, 4, 9, 11 and 13 will be prepaid. Expressage on Premiums 5, 6, 7, 8, 10 and 12 must be at the expense of addressees. In specifying premiums desired, please refer to the numbers. Having the addresses, and in most cases, the price lists, of 2000 dealers in Collectors' supplies, in all parts of the world, we enjoy unusual facilities for procuring collections of objects of all classes, at the lowest rates. We shall take pleasure in furnishing an estimate of the number of subscriptions required to obtain anything desired by any collector. It should be understood, however, that we are not dealers, and in no case offer objects for sale.

Young collectors should set to work at once to secure, without expense, some of the above mentioned prizes. Subscriptions should commence as early as possible, in order that no numbers of the Journal may be lost.

Please send remittances by money order or registered letter.

Address all communications to

The Editor of THE MUSEUM,

P. O. Box 22,

PHILADELPHIA, PA.





SMITHSONIAN INSTITUTION LIBRARIES



3 9088 01408 2903